ORDER No.AD0203063C2

Service Manual

Compact Disc Player

COMPACT disc DIGITAL AUDIO

MASH multi-stage noise shaping

SL-HD560E

Traverse Deck: RAE0152Z Mechanism Series

Colour

(N).....Gold Type

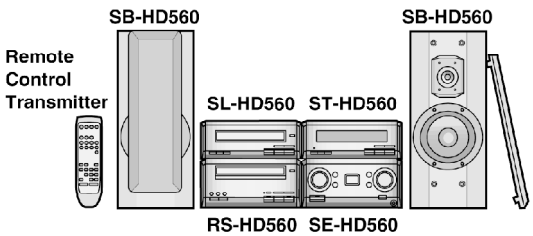
System

SC-HD560:

Tuner; ST-HD560, Amplifier; SE-HD560,

CD Player; SL-HD560, Cassette Deck; RS-HD560,

Speakers; SB-HD560 (Made in Spain.)



SPECIFICATIONS

Specifications

Digital output terminal:	**Optical × 1**
● **Audio section**	
DA converter:	**1 bit 2 DAC MASH**
● **Format**	
Sampling frequency:	**44.1 kHz**
● **Pickup**	
Wavelength:	**780 nm**
● **General**	
Dimensions (W×H×D):	**210×76.3×246 mm**
Mass:	**1.3 kg**

Notes:
Specifications are subject to change without notice.
Mass and dimensions are approximate.

***Note on CD-R and CD-RW**
This unit may not be able to play some CD-R due to the condition of recording.
It can not play CD-RW.

Technics

1. Note

1. Because to unique interconnecting cables, when a component requires service, send or bring in the entire system.

2. Refer to the service manual for Model No. SE-HD560 (Order No. AD0203061C2) for information on Accessories and Packaging.

2. Before Repair

This equipment (SL-HD560), which is a component of the system, is supplied with power from the Amplifier (SE-HD560) through the Tuner (ST-HD560). When repairing this equipment or checking operation of the system, be sure to connect to other systemcomponentswith it. Power supply and operation checks in the state of it as a single equipment is impracticable.

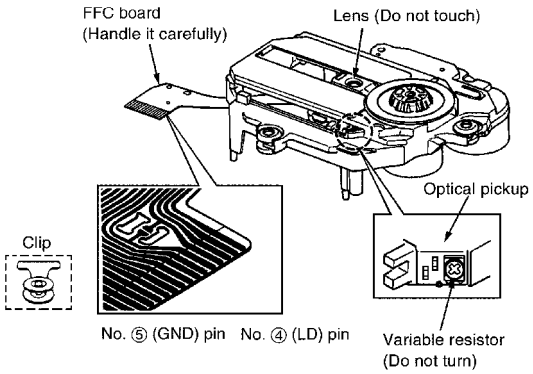
3. Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

3.1. Handling of traverse deck (optical pickup)

1. **Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.**
2. **To protect the laser diode against electrostatic breakdown, short the flexible board (FFC board) with a clip or similar object. Refer to Fig. 3-1.**
3. **Take care not to apply excessive stress to the flexible board (FFC board).**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted. Refer to Fig. 3-1.**

Fig. 3-1.

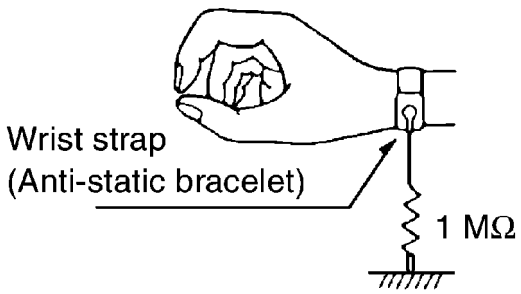


3.2. Grounding for electrostatic breakdown prevention

3.2.1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body. Refer to Fig. 3-2.

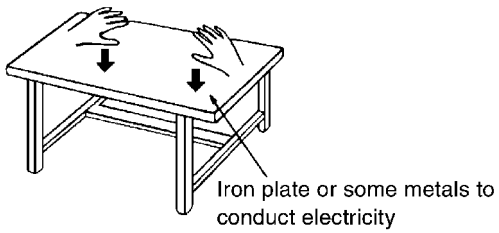
Fig. 3-2.



3.2.2. Work table grounding

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet. Refer to Fig. 3-3.

Fig. 3-3.



Caution:

The static electricity of your clothes will not be grounded through the wrist strap.
So take care not to let your clothes touch the traverse deck (optical pickup).

4. Precaution of Laser Diode

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
Wave length: 780 nm
Maximum output radiation power from pickup: 100 µW/VDE

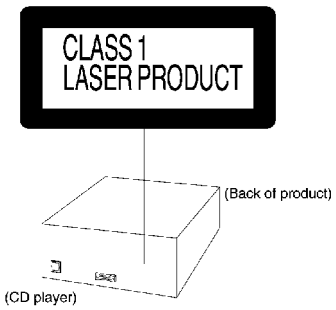
Laser radiation from the pickup unit is safety level, but be sure the followings:

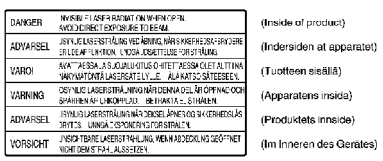
1. Do not disassernble the pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG: Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit adgestrahit.
Wellenlänge: 780 nm
Maximale Strahlungsleistung der Lasereinheit: 100 µW/VDE

Die strahlungan der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werksseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.



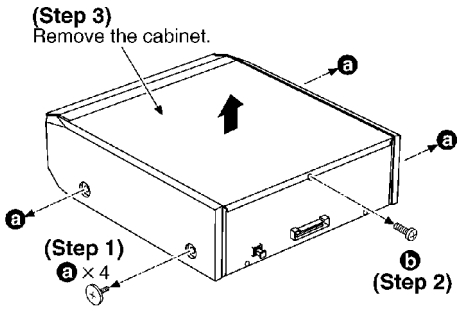


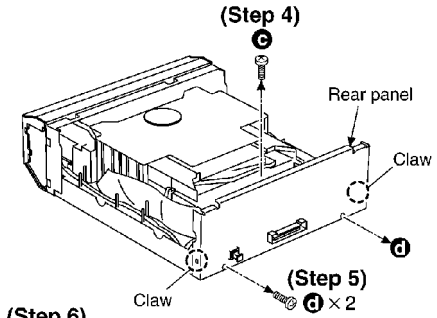
5. Location of Controls

6. Operation Checks and Component Replacement Procedures

- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

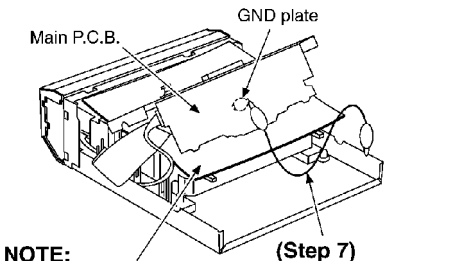
6.1. Checking for the main P.C.B.





(Step 6)
Release the 2 claws, and then remove the rear panel.

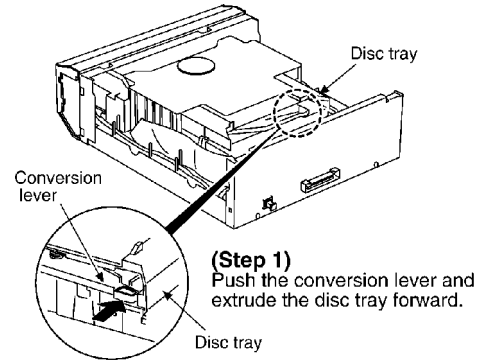
- Check the main P.C.B. as shown below.

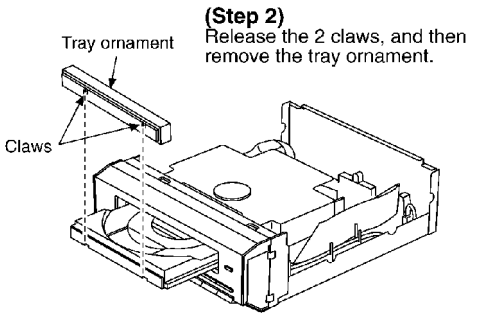


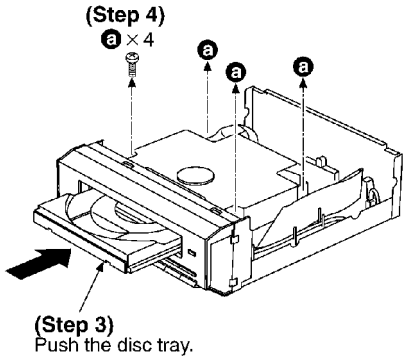
NOTE:
Insulate main P.C.B. with insulation material to avoid short-circuit.

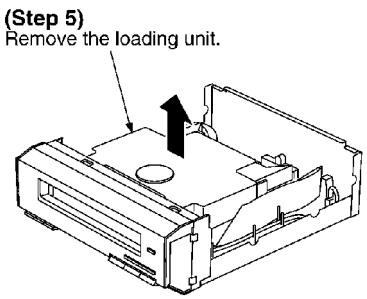
6.2. Checking for the CD servo P.C.B.

- Follow the (Step 1) - (Step 3) of item 6.1.

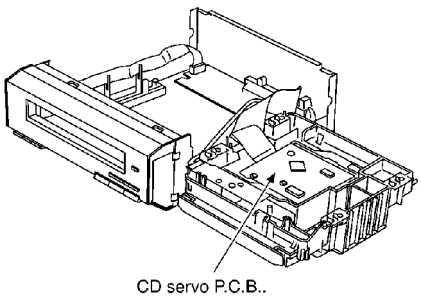








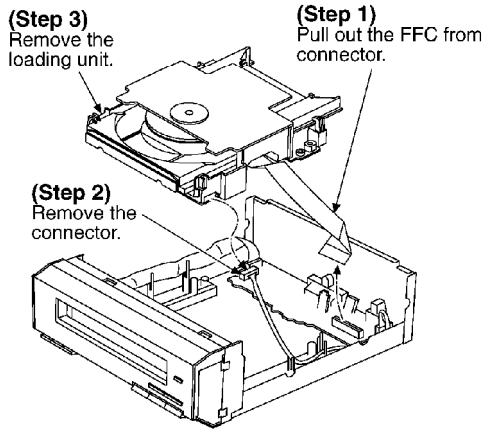
- Check the CD servo P.C.B. as shown below.

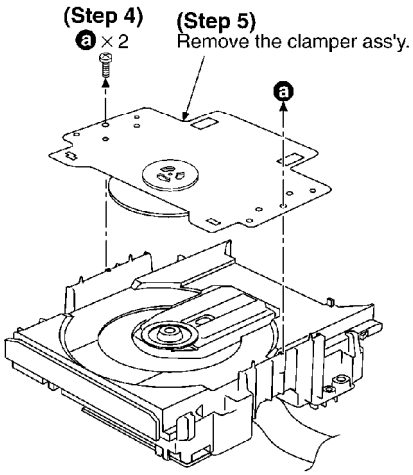


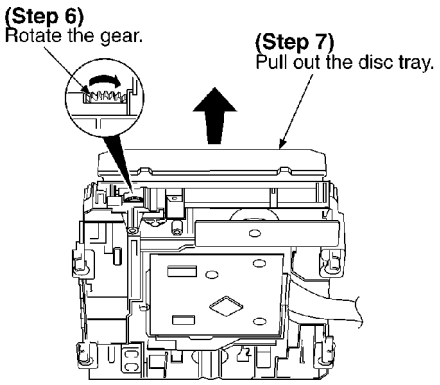
6.3. Replacement for the traverse deck ass'y

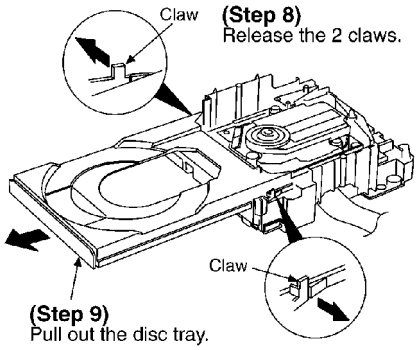
- Follow the (Step 1) - (Step 3) of item 6.1.

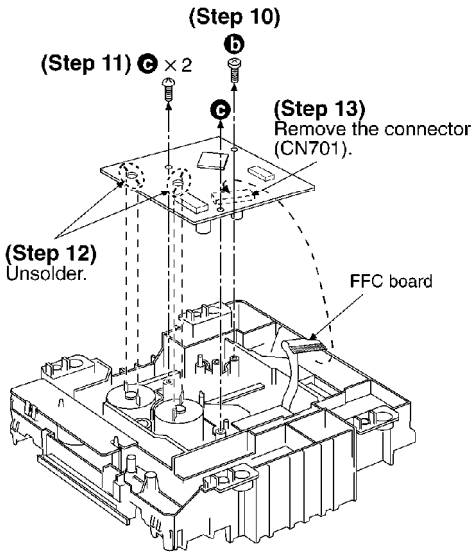
- Follow the (Step 1) - (Step 5) of item 6.2.





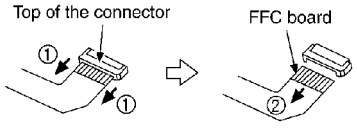

(Step 6)
Rotate the gear.
(Step 7)
Pull out the disc tray.


Claw
(Step 8)
Release the 2 claws.
Claw
(Step 9)
Pull out the disc tray.

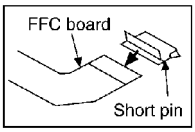

(Step 10)
b
(Step 11) c × 2
c
(Step 13)
Remove the connector
(CN701).
(Step 12)
Unsolder.
FFC board

■ Removal of the FFC board

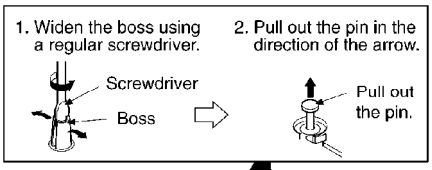
※ Push the top of the connector in the direction of arrow ①, and then pull out the FFC board in the direction of arrow ②.

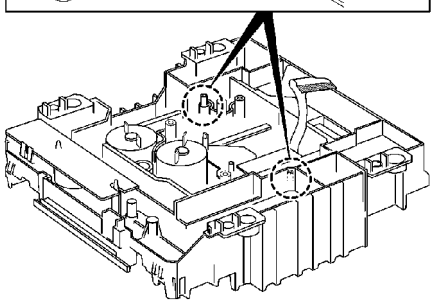


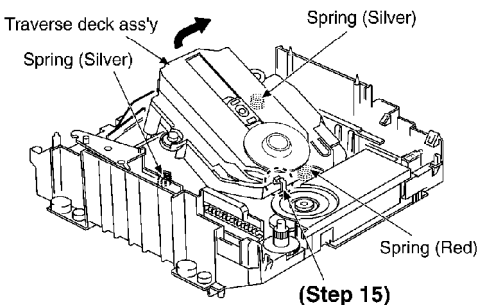
NOTE:
Insert a short pin into the traverse unit FFC board.
(Refer to "Handling Precautions for Traverse Deck".)



(Step 14)


1. Widen the boss using a regular screwdriver.
2. Pull out the pin in the direction of the arrow.
Screwdriver
Boss
Pull out the pin.



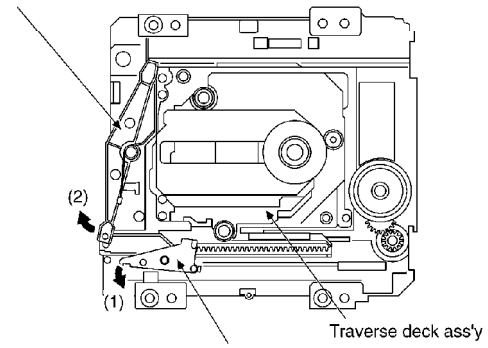


(Step 15)
Remove the claw.

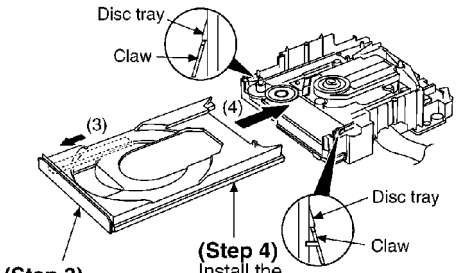
NOTE:
Be careful not to lose the 3 springs because those will also be removed on removal of the traverse deck ass'y.

Installation of the disc tray after replacement

(Step 2)
Operate the conversion lever, and then locate the traverse deck ass'y to "UP" position.



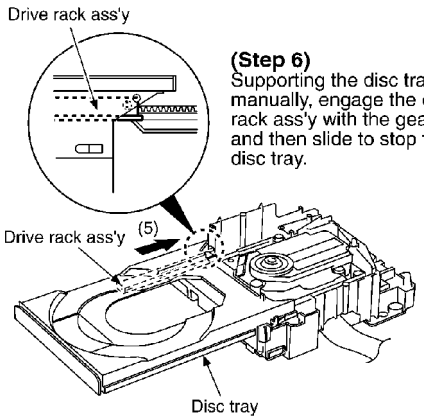
(Step 1)
Release the lock lever.



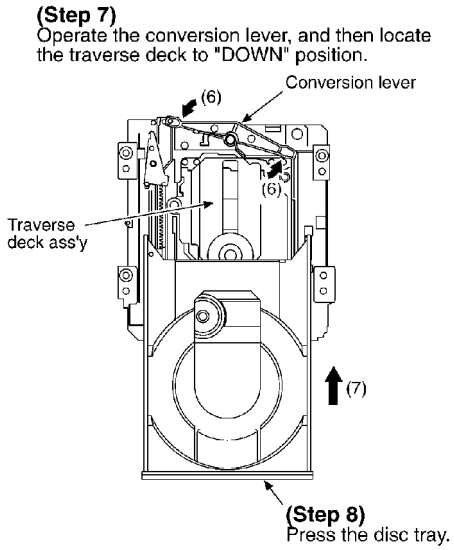
(Step 3)
Move the drive rack ass'y in the direction of arrow (3).

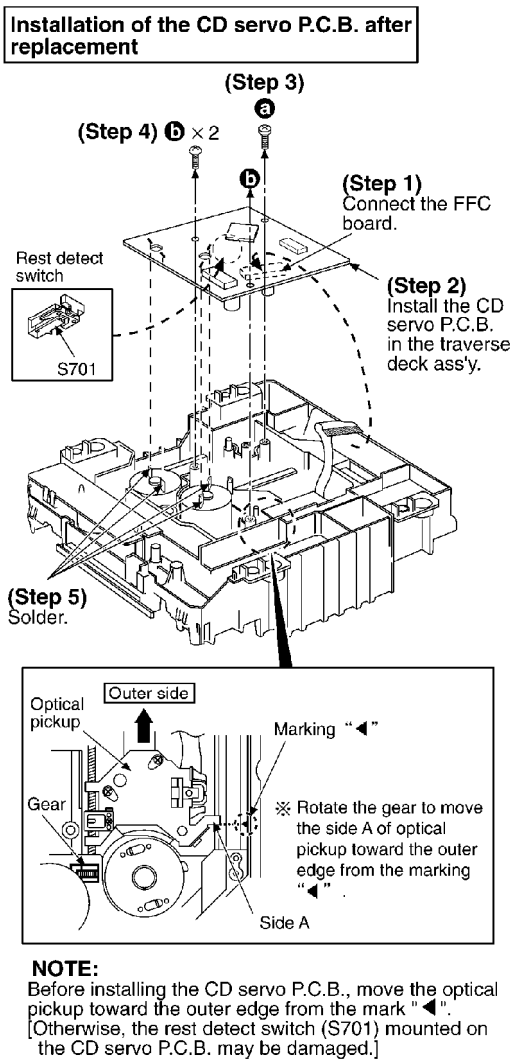
(Step 4)
Install the disc tray.

(Step 5)
Latch the claw to the disc tray.



(Step 6)
Supporting the disc tray manually, engage the drive rack ass'y with the gear and then slide to stop the disc tray.

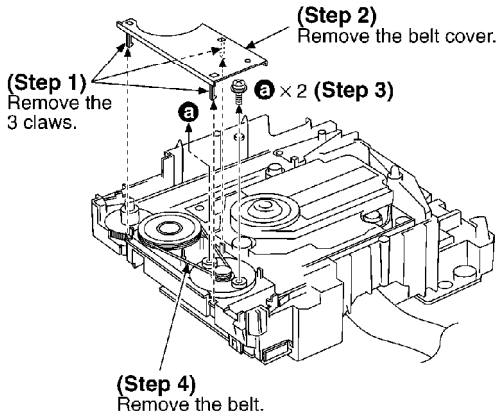


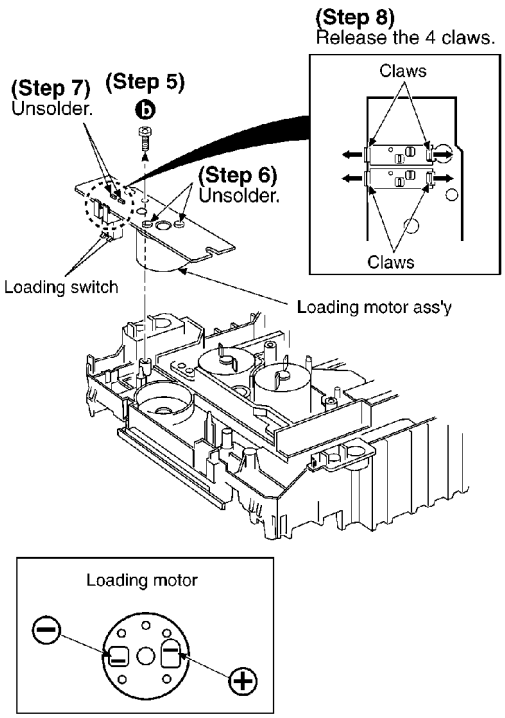


NOTE:
Before installing the CD servo P.C.B., move the optical pickup toward the outer edge from the mark "◀".
[Otherwise, the rest detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]

6.4. Replacement for the belt, loading motor ass'y and loading switch

- Follow the (Step 1) - (Step 3) of item 6.1.
- Follow the (Step 1) - (Step 5) of item 6.2.
- Follow the (Step 1) - (Step 9) of item 6.3.





7. Error Code Display and Servo Adjustment Function

This unit has an error code display function, so that if the unit operates incorrectly, the fault is displayed using an error code on the FL display of the Tuner (ST-HD560). It also has a servo adjustment function for displaying the status of servosystem functions(Focus, Tracking, CLV servo) on the FL display of the tuner. The system control IC and FL display are part of the tuner so make sure the system has been connected properly before using these functions. Use these two functions for guidanceduring faultdiagnosis and repair.

Note:

Check beforehand for scratching or soiling of the test disc

(SZZP1054C), and soiling or other problems with the pickup lens.

7.1. Error code display procedure

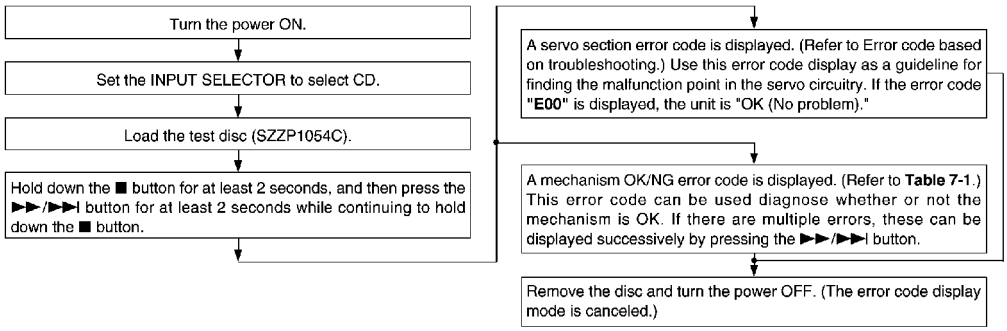
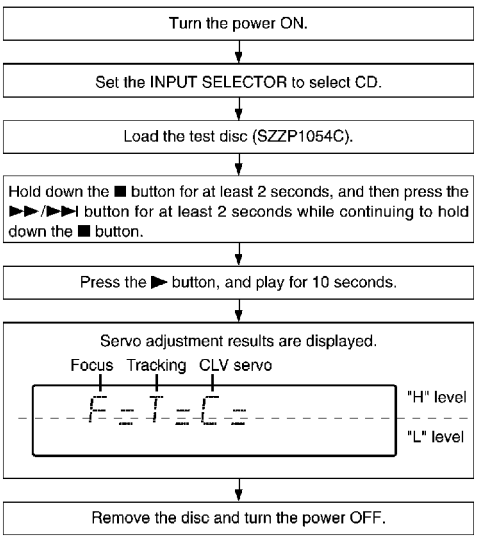

Turn the power ON.
Set the INPUT SELECTOR to select CD.
Load the test disc (SZZP1054C).
Hold down the ■ button for at least 2 seconds, and then press the ►►/►►I button for at least 2 seconds while continuing to hold down the ■ button.
A servo section error code is displayed. (Refer to Error code based on troubleshooting.) Use this error code display as a guideline for finding the malfunction point in the servo circuitry. If the error code "E00" is displayed, the unit is "OK (No problem)."
A mechanism OK/NG error code is displayed. (Refer to Table 7-1.) This error code can be used diagnose whether or not the mechanism is OK. If there are multiple errors, these can be displayed successively by pressing the ►►/►►I button.
Remove the disc and turn the power OFF. (The error code display mode is canceled.)

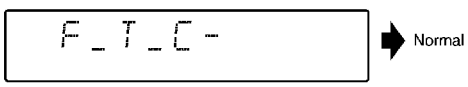
Table 7-1.

FL display	Symptom	Cause
H15	When CD tray opens, it closes by itself.	Disc tray open detect switch (S790) fa
H16	When CD tray closes, it opens by itself.	Disc tray close detect switch (S791) f
F15	Does not play, even when button is pressed.	Pickup rest detect switch (S701) fault
F26	Does not move, even when button is pressed.	System control IC and servo process (IC201, IC702) fault.

7.2. Servo adjustment procedure


Turn the power ON.
Set the INPUT SELECTOR to select CD.
Load the test disc (SZZP1054C).
Hold down the ■ button for at least 2 seconds, and then press the ►►/►►I button for at least 2 seconds while continuing to hold down the ■ button.
Press the ► button, and play for 10 seconds.
Servo adjustment results are displayed.
Focus Tracking CLV servo
"H" level
"L" level
Remove the disc and turn the power OFF.

(Example)

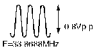
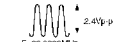


	"L" level	"H" level
Focus system	normal	defective
Tracking system	normal	defective
CLV servo system	defective	normal

7.3. Error code based on troubleshooting

- This unit is satisfactory if the error code is E00 .

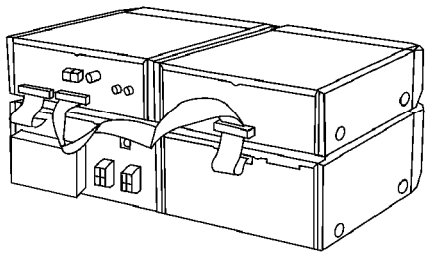
- Before testing, check that the test disc is free of scratches and optical pickup is clean.

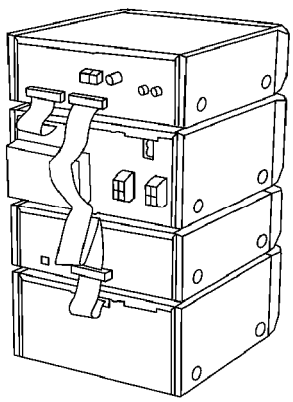
FL error code display	Symptom	Probable cause	Signal to check		Normal voltage and waveform values	
			Location	Signal name	PLAY	STOP
E01	Focus and tracking offset adjustments not completed in the specified time period.	1. Clocks X1, power supply VDD and reset/RST, all on IC702. 2. MDATA, MCLK, and MLD signal to/from IC403.	IC702 ⑧pin	MDATA	0.3V	0V
			IC702 ⑦pin	MCLK		3.3V
			IC702 ⑨pin	MLD		
			IC702 ⑱pin	/RST	3.3V	3.3V
			IC702 ㊽pin	X1 IN		
			IC702 ㊾pin	X2 OUT		
E02 E04 E06 E0A E0C E0E	Disc play unstable.	1. Scratches or contaminants on disc surface. 2. Focus and tracking servo circuits. (check waveforms, voltages, and part values.) 3. Spindle driver circuit. 4. Optical pickup.	IC702 ㉜pin	FE		1.7V
			IC702 ㉝pin	TE		1.7V
			IC702 ㉘pin	FOD	1.7V	1.7V
			IC702 ㉗pin	TRD	1.7V	1.7V
			IC702 ㊳pin	/RFDET	0V	3.4V
			TJ 701	RF		1.0 V
			IC702 ⑰pin	STAT	3.3V	0V
			IC702 ㉚pin	FBAL	1.7 ±0. 85V	1.7 ±0. 85V
E08 E0A	Focus or Tracking gain adjustment not completed in the specified time period.	1. Scratches or contaminants on disc surface. 2. Focus and Tracking servo circuit. (check waveforms, voltages, and part values.) 3. Optical pickup.	IC702 ㉜pin	FE		1.7V
			IC702 ㉝pin	TE		1.7V
			IC702 ㊱pin	OFT	0V	0V

8. To Supply Power Source

This unit is designed to operate on power supplied from system connected. / When a component requires service, use the system connections to supply power source. / For system connections, refer to Fig.8-1.

Fig. 8-1.





9. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S701:

Rest detect switch in OFF position

S790:

Disc Tray open detect switch in OFF position

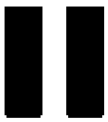
S791:

Disc Tray close detect switch in OFF position

S801:

Disc tray open/close switch / (**OPEN/CLOSE)**

S802:

Pause switch ( **)**

S803:

F.Skip/search switch (**)**

S804:

Play switch (**)**

S805:

Stop switch (**)**

S806:

R.Skip/search switch (**)**

S807:

CD edit switch (EDIT)

S808:

Repeat switch (REPEAT)

S809:

Random play switch (RANDOM)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on theinternalimpedance of the DC circuit tester.

No mark

: CD Stop

( )

: CD Play [1 kHz, L+R, 0 dB]

- Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts list.

- Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

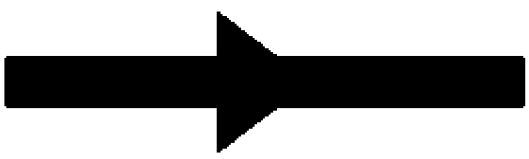
Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

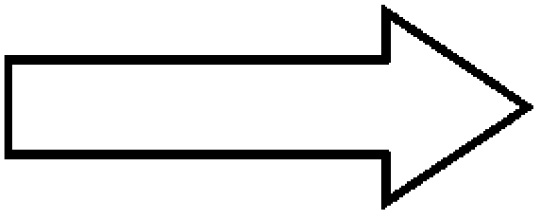
Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

- Voltage and signal line



: Positive voltage line



: CD signal line

10. Schematic Diagram

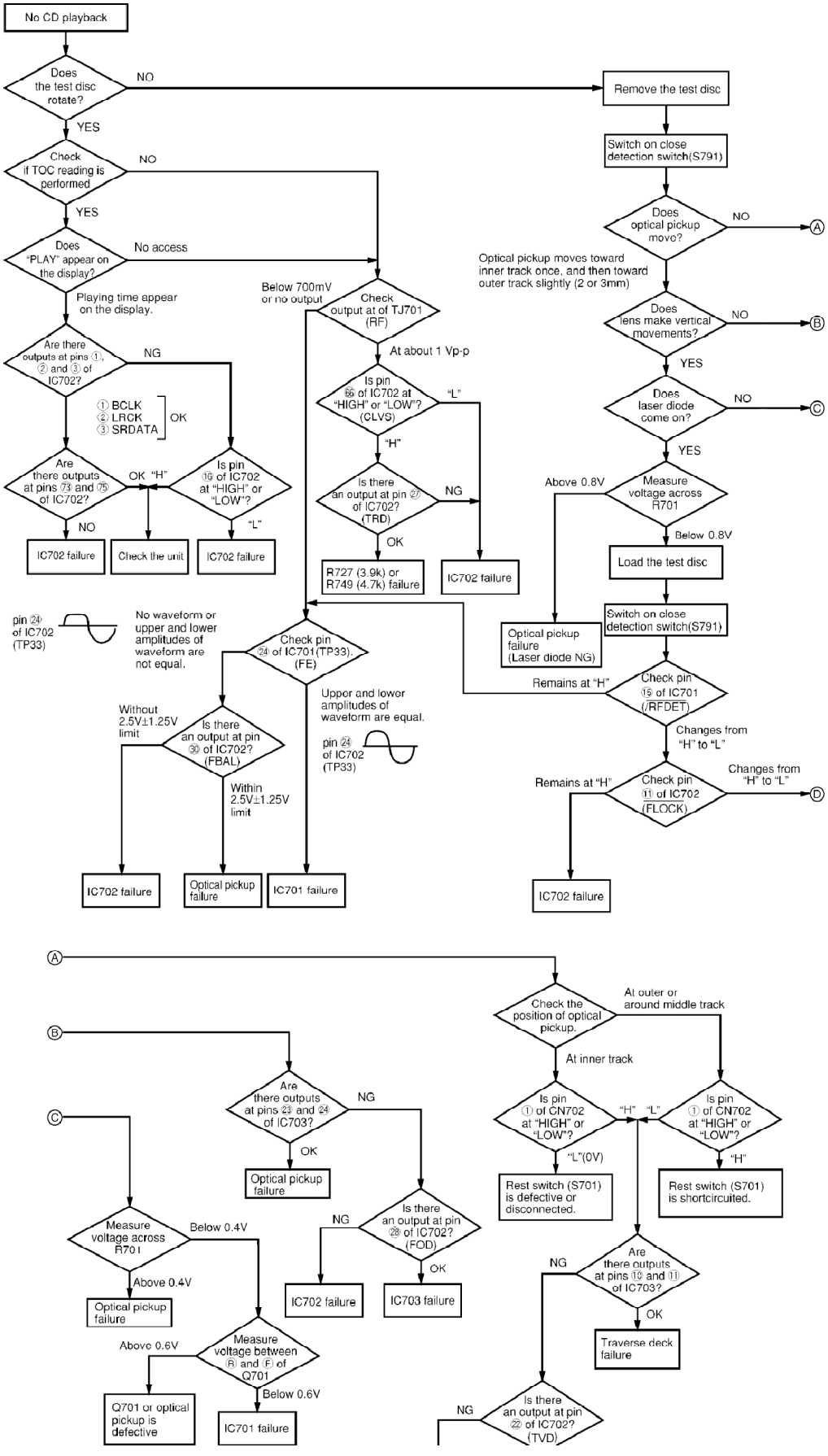
11. Printed Circuit Board Diagram

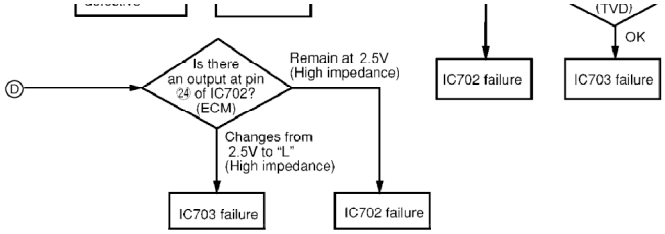
12. Type Illustration of ICs, Transistors and Diodes

13. Wiring Connection Diagram

14. Block Diagram

15. Troubleshooting Guide


No CD playback
Does the test disc rotate?
NO
YES
Check if TOC reading is performed
NO
YES
Does "PLAY" appear on the display?
No access
Playing time appear on the display.
Are there outputs at pins ①, ② and ③ of IC702?
NG
① BCLK
② LRCK
③ SRDATA
OK
Are there outputs at pins ⑬ and ⑮ of IC702?
OK "H"
Is pin ⑯ of IC702 at "HIGH" or "LOW"?
NO
"L"
IC702 failure
Check the unit
IC702 failure
Below 700mV or no output
Check output at of TJ701 (RF)
At about 1 Vp-p
Is pin ⑯ of IC702 at "HIGH" or "LOW"? (CLVS)
"L"
"H"
Is there an output at pin ㉗ of IC702? (TRD)
NG
OK
R727 (3.9k) or R749 (4.7k) failure
IC702 failure
pin ㉔ of IC702 (TP33)
No waveform or upper and lower amplitudes of waveform are not equal.
Check pin ㉔ of IC701(TP33). (FE)
Upper and lower amplitudes of waveform are equal.
pin ㉔ of IC702 (TP33)
Without 2.5V±1.25V limit
Is there an output at pin ㉚ of IC702? (FBAL)
Within 2.5V±1.25V limit
IC702 failure
Optical pickup failure
IC701 failure
Remove the test disc
Switch on close detection switch(S791)
Does optical pickup move?
NO
Optical pickup moves toward inner track once, and then toward outer track slightly (2 or 3mm)
Does lens make vertical movements?
NO
YES
Does laser diode come on?
NO
YES
Above 0.8V
Measure voltage across R701
Below 0.8V
Load the test disc
Switch on close detection switch(S791)
Optical pickup failure (Laser diode NG)
Remains at "H"
Check pin ⑮ of IC701 (/RFDET)
Changes from "H" to "L"
Remains at "H"
Check pin ⑪ of IC702 (FLOCK)
Changes from "H" to "L"
IC702 failure
Ⓐ
Check the position of optical pickup.
At outer or around middle track
At inner track
Is pin ① of CN702 at "HIGH" or "LOW"?
"H"
"L"
"L"(0V)
Rest switch (S701) is defective or disconnected.
Is pin ① of CN702 at "HIGH" or "LOW"?
"H"
Rest switch (S701) is shortcircuited.
Ⓑ
Are there outputs at pins ㉓ and ㉔ of IC703?
NG
OK
Optical pickup failure
Ⓒ
Measure voltage across R701
Below 0.4V
Above 0.4V
Optical pickup failure
Is there an output at pin ㉘ of IC702? (FOD)
NG
OK
IC702 failure
IC703 failure
Are there outputs at pins ⑩ and ⑪ of IC703?
NG
OK
Traverse deck failure
Above 0.6V
Measure voltage between Ⓑ and Ⓕ of Q701
Below 0.6V
Q701 or optical pickup is defective
IC701 failure
Is there an output at pin ㉒ of IC702? (TVD)
NG



16. Terminal Function of ICs

16.1. IC201 (C2BBFD000340): / System Control

Pin No.	Terminal Name	I/O	Function
1	V_{CC}	I	Power supply terminal
2	VREF	I	Reference voltage input
3	AV_{SS}	-	GND terminal
4	SYNC	I	Power failure detect signal input
5	SUBQ	I	Sub-code Q data signal input
6	SQCK	O	Sub-code Q resistor clock signal output
7	BLKCK	I	Sub code block clock signal input
8	B REQ	I	Serial communication request signal input from FL display/ System control IC
9	B CS	O	Serial communication CS signal output for FL display/System control IC
10	B CLK	O	Serial communication clock signal output for FL display/ System control IC
11	DATA O	O	Serial communication data signal output for FL display/ System control IC
12	DATA I	I	Serial communication data signal input from FL display/ System control IC
13	CW	O	Loading motor control signal (OPEN) output
14	CCW	O	Loading motor control signal (CLOSE) output
15	CNV_{SS}	-	GND terminal
16	SERVO RST	O	Reset signal output
17	NC	-	Not used, open
18	RESET	I	Reset signal input
19	X IN	I	Oscillator connected terminal (F= 6 MHz)
20	X OUT	O	

Pin No.	Terminal Name	I/O	Function
21	Vss	-	GND terminal
22	LED ORG	O	LED (orange) control signal output
23	NC	-	Not used, open
24			
25	LED GRN	O	LED (green) control signal output
26	TEST	O	TEST mode signal output
27	MDATA	O	Command data signal output
28	MCLK	O	Command clock signal output
29	MLD	O	Command load signal output
30	STATUS	I	Status signal input
31	NC	-	Not used, open
32			
33	REST SW	I	REST detect switch signal input
34 | 36	NC	-	Not used, open
37	OPEN SW	I	Disc tray open detect switch signal input
38	NC	-	Not used, open
39	H:CR2	O	Connected to GND
40	KEY2	I	Key switches detect signal input
41	KEY1	I	Key switches detect signal input
42	CLOSE SW	I	Disc tray close detect switch signal input

16.2. IC701 (AN8885SBE1V): / Servo Amp

Pin No.	Terminal Name	I/O	Function
1	PDE	I	Tracking signal input terminal 1 (E ch)
2	PDF	I	Tracking signal input terminal 2 (F ch)
3	V_{CC}	I	Power supply terminal
4	PDA	I	Focus signal input terminal 1 (A ch)
5	PDB	I	Focus signal input terminal 2 (B ch)
6	LPD	I	Laser PD signal
7	LD	O	Laser power auto control output
8	RF	O	RF amp terminal
9	RFIN	I	AGC input terminal
10	CSBRT	I	OFTR capacitor connection terminal
11	CEA	I	HPF-AMP capacitor connection terminal
12	BDO	O	Dropout detection control
13	LDON	I	LD APC ON/OFF (H: ON)
14	GND	-	GND terminal
15	/RFDET	O	RF detect signal output (L: detect)
16	PDOWN	-	Power down terminal
17	OFTR	O	Off track detection (H: detect)
18	DEFLVL	-	OFTR/ DO detection level control terminal
19	ENV	O	Envelope signal output
20	GCTL	I	RF/FE/TE gain control terminal
21	EQSW	I	EQ characteristic control terminal
22	TEN	I	Tracking error signal input
23	TEOUT	O	Tracking error signal output
24	FEOUT	O	Focus error signal output
25	FEN	I	Focus error signal input
26	VREF	O	Reference voltage output
27	TBAL	I	Tracking balance adj. input
28	FBAL	I	Focus balance adj. input

16.3. IC702 (MN662790RSC): / Servo Processor/Digital Signal Processor/Digital Filter/ / D/A converter

Pin No.	Terminal Name	I/O	Function
1	BCLK	-	Serial bit clock output (Not used, open)
2	LRCK	-	L/R discriminating signal output (Not used, open)
3	SRDATA	-	Serial data signal output (Not used, open)
4	DV_{DD} 1	I	Power supply terminal
5	DV_{SS} 1	-	GND terminal
6	TX	O	Digital audio interface signal output
7	MCLK	I	Command clock signal input
8	MDATA	I	Command data signal input
9	MLD	I	Command load signal input
10	SENSE	-	Sense signal (Not used, open)
11	/FLOCK	-	Optical servo condition (focus) (Not used, open)
12	/TLOCK	-	Optical servo condition (tracking) (Not used, open)
13	BLKCK	O	Sub-code block clock signal output (f=75 Hz)
14	SQCK	I	Sub-code Q resistor clock signal input
15	SUBQ	O	Sub-code Q data signal output
16	DMUTE	I	Muting input (Not used, connected to GND)
17	STAT	O	Status signal output
18	/RST	I	Reset signal input (L: reset)
19	SMCK	-	System clock (Not used, open)
20	CSEL	I	Frequency control terminal of crystal oscillator (Connected to V_{DD})
21	TRV	-	Traverse servo control signal output (Not used, open)
22	TVD	O	Traverse drive signal output
23	PC	O	Turntable motor drive signal output (L: ON)
24	ECM	O	Turntable motor drive signal output (Forced mode)
25	ECS	O	Turntable motor drive signal output

			(Servo error signal)

Pin No.	Terminal Name	I/O	Function
26	KICK	-	Kick pulse output (Not used, open)
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	I	D/A drive output normal voltage input
30	FBAL	O	Focus balance adj. output
31	TBAL	O	Tracking balance adj. output
32	FE	I	Focus error signal input
33	TE	I	Tracking error signal input
34	RFENV	I	RF envelope signal input
35	VDET	I	Oscillator detect signal input (H: detect)
36	OFT	I	Off track signal input (H: Off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detect signal input (L: detect)
39	BDO	I	Dropout detection signal input (H : dropout)
40	LDON	O	Laser power control signal output (H: ON)
41	PLLF2	-	PLL loop filter terminal (Not used, open)
42	DSLF2	O	DSL loop filter terminal
43	WVEL	-	Double velocity status signal output (Not used, open)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal
47	DSLF	I/O	DSL loop filter terminal
48	PLLF	I/O	PLL loop filter terminal
49	VCOF	-	VCO loop filter terminal (Not used, connected to GND)
50	AV_{DD} 2	I	Power supply terminal
51	AV_{SS} 2	-	GND terminal
52	EFM	-	EFM signal (Not used, open)
53	PCK	-	PLL extract clock (Not used, open)
54	VCOF2	-	VCO loop filter terminal (Not used, connected to GND)
55	SUBC	-	Sub-code serial output clock (Not used, open)
56	SBCK	-	Sub-code serial input data (Not used, connected to GND)

Pin No.	Terminal Name	I/O	Function
57	V_{SS}	-	GND terminal
58	X1 IN	I	Crystal oscillator terminal (f= 33.8688 MHz)
59	X2 OUT	O	
60	V_{DD}	I	Power supply terminal
61	BYTCK	-	Byte clock signal (Not used, open)
62	/CLDCK	-	Sub-code frame clock signal (Not used, open)
63	FCLK	-	Crystal frame clock (Not used, open)
64	IPFLAG	-	Interpolation flag terminal (Not used, open)
65	FLAG	-	Flag terminal (Not used, open)
66	CLVS	-	Turntable servo phase synchro signal (Not used, open)
67	CRC	-	Sub-code CRC check terminal (Not used, open)
68	DEMPH	-	De-emphasis ON signal (Not used, open)
69	RESY	-	Re-synchronizing signal of frame sync. (Not used, open)
70	IOSEL	I	I/O select signal input (Connected to V_{DD})
71	/TEST	I	Test terminal (Not used, connected to power supply)
72	AV_{DD} 1	I	Power supply terminal
73	OUTL	O	L ch audio signal output
74	AV_{SS} 1	-	GND terminal
75	OUTR	O	R ch audio signal output
76	RSEL	I	Polarity direction control terminal of RF signal (Not used, connected to power supply)
77	IOV_{DD}	I	Power supply terminal
78	PSEL	I	Test terminal (Connected to GND)
79	MSEL	I	Output frequency select signal input (Connected to GND)
80	SSEL	I	SUBQ output mode select signal input (Not used, connected to V_{DD})

16.4. IC703 (AN8739SBE2): / Focus Coil/Tracking Coil/ / Traverse Motor/Spindle / Motor Drive

Pin No.	Terminal Name	I/O	Function
1	/RST	-	Not used, open
2	NC	-	Not used
3	IN2	I	Motor driver 2 input
4	PC2	I	Turntable motor drive signal input (L: ON)
5	NC	-	Not used
6	IN1	I	Motor driver 1 input
7	PV_{CC} 1	I	Driver power supply terminal 1
8	PGND1	-	Driver GND terminal 1
9	NC	-	Not used, connected to GND
10	D1-	O	Traverse motor driver 1 output terminal (-)
11	D1+	O	Traverse motor driver 1 output terminal (+)
12	D2-	O	Spindle motor driver 2 output terminal (-)
13	D2+	O	Spindle motor driver 2 output terminal (+)
14	D3-	O	Tracking coil signal output terminal (-)
15	D3+	O	Tracking coil signal output terminal (+)
16	D4-	O	Focus coil signal output terminal (-)
17	D4+	O	Focus coil signal output terminal (+)
18	NC	-	Not used
19	PGND2	-	Driver GND terminal 2
20	PV_{CC} 2	I	Driver power supply terminal 2
21	V_{CC}	I	Power supply terminal
22	VREF	I	Reference voltage input terminal
23	IN4	I	Motor driver 4 input
24	IN3	I	Motor driver 3 input
25	RSTIN	I	Reset terminal (Not used, connected to GND)
26	NC	-	Not used, connected to GND

17. Replacement Parts List

Notes:

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.
- The marking [RTL] indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RHD30082-K1	SCREW	4	
2	RKM0413A-N	CABINET	1	
3	XTBS3+8JFZ1	SCREW	7	
4	RGK1326-M	SIDE PANEL(L)	1	
5	RGK1327-M	SIDE PANEL(R)	1	
6	REZ1459	FFC(19P)	1	
7	RGK1322A-S	TRAY ORNAMENT	1	
8	RKA0114-K	FOOT	4	
8-1	RKA0083-K	CUSHION	4	
9	RGP0840-S	SUB PANEL	1	
10	RGK1330-S	SIDE ORNAMENT(L)	1	
11	RGK1331-S	SIDE ORNAMENT(R)	1	
12	RGL0528-Q	INDICATOR,PLAY	1	
13	SHE170-2	P.C.B.SUPPORT	1	
14	XTBS26+8J	SCREW	5	
15	XTB3+5JFZ	SCREW	4	
16	RGU1934-S	BUTTON,PLAY	1	
17	XTB3+12JFZ	SCREW	5	
18	XTB3+8JFZ	SCREW	4	
19	RGG0188B-S	FRONT PANEL	1	
20	REX1080Y	CONNECTOR ASS'Y(6P)	1	
21	RMN0625	MECHA SPASER(L)	1	
22	RMN0626	MECHA SPASER(R)	1	
23	RGU1937-S	BUTTON,EDIT	1	
101	RFKJXDT07-K	LOADING CHASSIS ASS'Y	1	
101-1	RDG0142	LOADING GEAR(2)	1	
101-2	RDG0193	LOADING GEAR(1)	1	
101-3	RDP0065	PULLEY GEAR	1	
102	REM0019	LOADING MOTOR	1	
104	RGQ0144-K	DISC TRAY	1	
105	RAE0152Z-1S	TRAVERSE DECK ASS'Y	1	⚠
105-1	SHGD113-1	FLOATING RUBBER	3	
105-2	SNSD38	SCREW	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
105-3	RAF0150A-4S	OPTICAL PICKUP	1	⚠
105-4	RDG0247	DRIVE GEAR	1	
105-5	RDG0248	INTERMEDIATE GEAR	1	
105-6	REQ0089	TRAVERSE MOTOR	1	
105-7	RXQ0304-1	NUT PLATE ASS'Y	1	
105-8	XQN17+CG5	SCREW	1	
105-9	XQS2+A3FZ	SCREW	1	
105-10	XQS17+A35FZ	SCREW	2	
106	RMS0350-1	PIN(B)	1	
107	RMS0627	PIN(A)	1	
108	RME0109	FLOATING SPRING(1)	2	
109	RME0142	FLOATING SPRING(2)	1	
110	RMR0698-K1	TRAVERSE CHASSIS	1	
111	XTV2+6G	SCREW	2	
112	RME0063	LOCK LEVER SPRING	1	
113	RMM0079A-1	SLIDE PLATE 1	1	
114	RML0178-1	LOCK LEVER	1	
115	RFKNLPG440-K	DRIVE RACK ASS'Y	1	
116	RHD20009-1	SCREW	1	
117	RME0087A-1	ASSIST SPRING	1	
118	RML0349	CONVERSION LEVER	1	
119	RMM0059A-1	SLIDE PLATE 2	1	
120	RMR0334	MAGNET HOLDER	1	
121	RMQ0653	MAGNET	1	
122	RXQ0380	DISC HOLDER	1	
123	XTN26+6G	SCREW	3	
124	RMA0793-1	DISC CLAMPER ASS'Y	1	
125	XYN2+F6FZ	SCREW	2	
126	RMG0158	BELT	1	
127	XTN2+6G	SCREW	1	
C201	ECA1CAM221XB	16V 220U	1	
C202	RCE1HKA3R3BG	50V 3.3U	1	F2A1H3R3A015
C203,04	ECUVNE104KBN	25V 0.1U	2	
C240,41	ECUV1H471JCN	50V 470P	2	F1J1H471A025
C242	ECUV1E103ZFN	25V 0.01U	1	F1J1E103A007
C401-03	ECUV1H102KBN	50V 1000P	3	ECJ2VB1H102K
C405	ECUVNE104ZFN	25V 0.1U	1	F1J1E1040017
C409	ECUV1E103ZFN	25V 0.01U	1	F1J1E103A007
C410	RCE1EM471BV	25V 470U	1	F2A1E471A013
C412,13	ECUV1E103ZFN	25V 0.01U	2	F1J1E103A007
C414	ECUVNC105ZFN	16V 1U	1	F1J1C105A063
C416	ECA1CAK220XB	16V 22U	1	
C419	ECA1APX221B	10V 220U	1	
C420	ECA0JAK221XH	6.3V 220U	1	
C426	ECUV1H101JCN	50V 100P	1	ECJ2VC1H101J
C701	ECEA0JKA330I	6.3V 33U	1	
C702	ECUV1C104KBV	16V 0.1U	1	F1H1C104A042
C703	ECEA0JKS101	6.3V 100U	1	
C704	ECUV1C104KBV	16V 0.1U	1	F1H1C104A042
C706	ECUV1H272KBV	50V 2700P	1	ECJ1VB1H272K
C707	ECUV1E273KBV	25V 0.027U	1	
C710	ECUV1H121KCV	50V 120P	1	
C711,12	ECUX1C104ZFV	16V 0.1U	2	

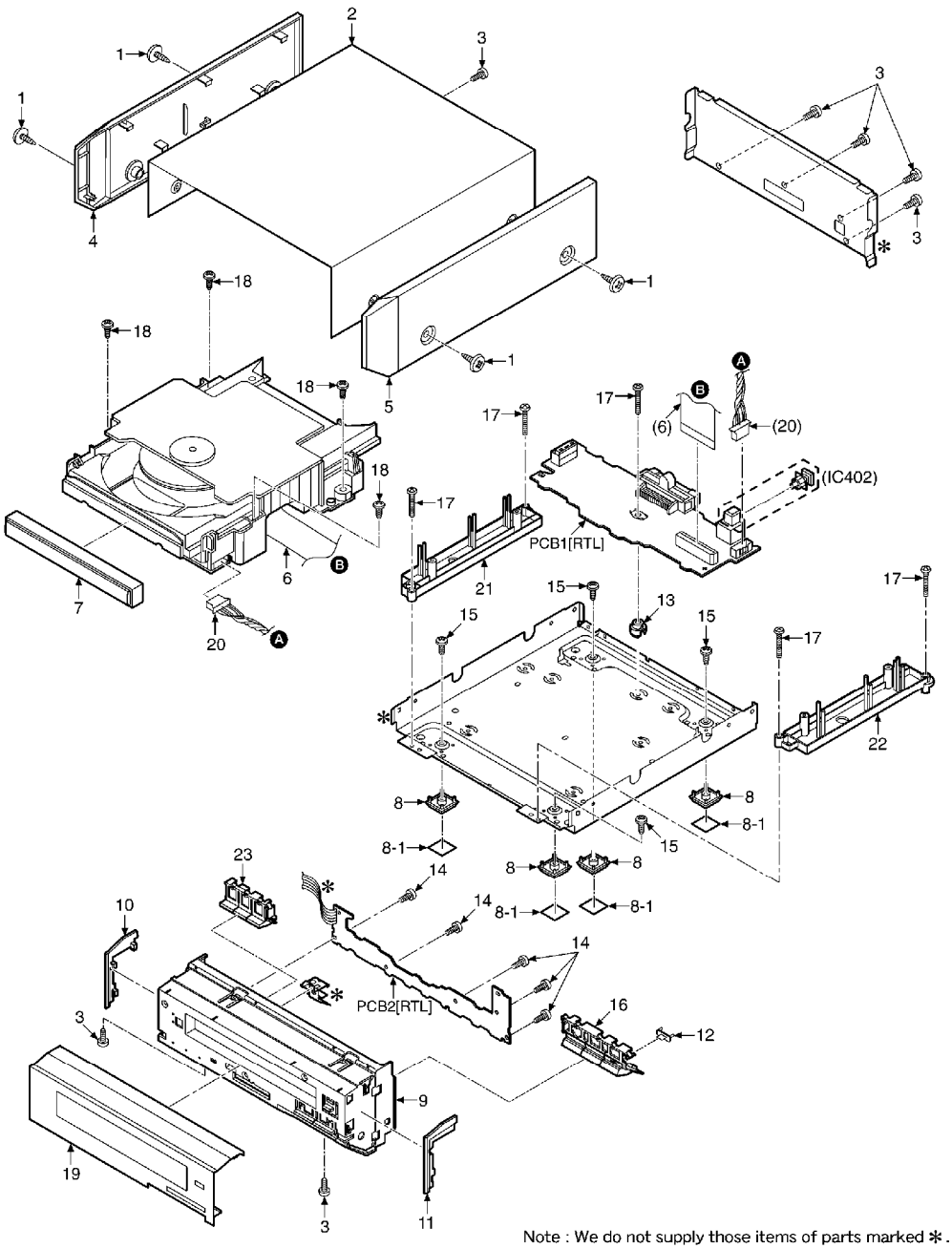
[illegible]	[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C713	ECUV1C104KBV	16V 0.1U	1	F1H1C104A042
C714	ECEA0JKS101	6.3V 100U	1	
C715	ECUV1H272KBV	50V 2700P	1	ECJ1VB1H272K
C716	ECUV1H821KBN	50V 820P	1	ECJ2VB1H821K
C717	ECUX1C104ZFV	16V 0.1U	1	
C718	ECUV1A224KBV	10V 0.22U	1	F1H1A224A001
C721,22	ECUV1H100DCV	50V 10P	2	F1H1H100A804
C723	ECEA1AKS221	10V 220U	1	
C724	ECUVNE104MBN	25V 0.1U	1	F1J1C104A065
C725,26	ECUV1H102KBV	50V 1000P	2	ECJ1VB1H102K
C727,28	ECEA1HKS010	50V 1U	2	
C730	ECUX1C104ZFV	16V 0.1U	1	
C731,32	ECEA1AKS221	10V 220U	2	
C733	ECUV1C104KBV	16V 0.1U	1	F1H1C104A042
C734	ECEA1AKS221	10V 220U	1	
C735	ECUVNE104ZFN	25V 0.1U	1	F1J1E1040017
C736,37	ECUX1C104ZFV	16V 0.1U	2	
C738	ECUV1H103KBN	50V 0.01U	1	ECJ2VB1H103K
C739	ECUV1H152KBV	50V 1500P	1	ECJ1VB1H152K
C742	ECUV1E273KBV	25V 0.027U	1	
C743	ECUX1C104ZFV	16V 0.1U	1	
C744	ECUV1E562KBV	25V 5600P	1	
C745	ECUV1H102KBV	50V 1000P	1	ECJ1VB1H102K
C747	ECUV1H181KCV	50V 180P	1	
C749	ECJ1VB1H222K	50V 2200P	1	
C750	ECUVNE104MBN	25V 0.1U	1	F1J1C104A065
C751	ECUV1C104KBV	16V 0.1U	1	F1H1C104A042
C752	ECUV1H102KBV	50V 1000P	1	ECJ1VB1H102K
C753,54	ECUV1H471KBV	50V 470P	2	F1H1H471A013
C790	ECA1AKF820E	10V 82U	1	
CN401	RJP6G18ZA	CONNECTOR(6P)	1	K1KA06A00220
CN402	RJS1A6819	CONNECTOR(19P)	1	K1MN19A00013
CN403	RJS1A6606T1	CONNECTOR(6P)	1	K1MP06A00009
CN701	K1MN16B00080	CONNECTOR(16P)	1	
CN702	RJS1A6719-1Q	CONNECTOR(19P)	1	
CP790	RJP6G17ZA	CONNECTOR(6P)	1	K1KA06B00117
D201	MA2J11100L	DIODE	1	
D221	MA2J11100L	DIODE	1	
D222	MA8033L	DIODE	1	MAZ80330L
D404	MA8075MTX	DIODE	1	MAZ80750ML
D409,10	MA2J11100L	DIODE	2	
D500,01	MA2J11100L	DIODE	2	
D801	SML79420C	LED	1	
IC201	C2BBFD000340	IC	1	
IC401	C0CAABE00007	IC	1	
IC402	GP1FA550TZ	IC	1	B3ZAZ0000008
IC701	AN8885SBE1V	IC	1	
IC702	MN662790RSC	IC	1	
IC703	AN8739SBE2	IC	1	AN8739SBTE2
IC790	TA7291S	IC	1	C0GAL0000001

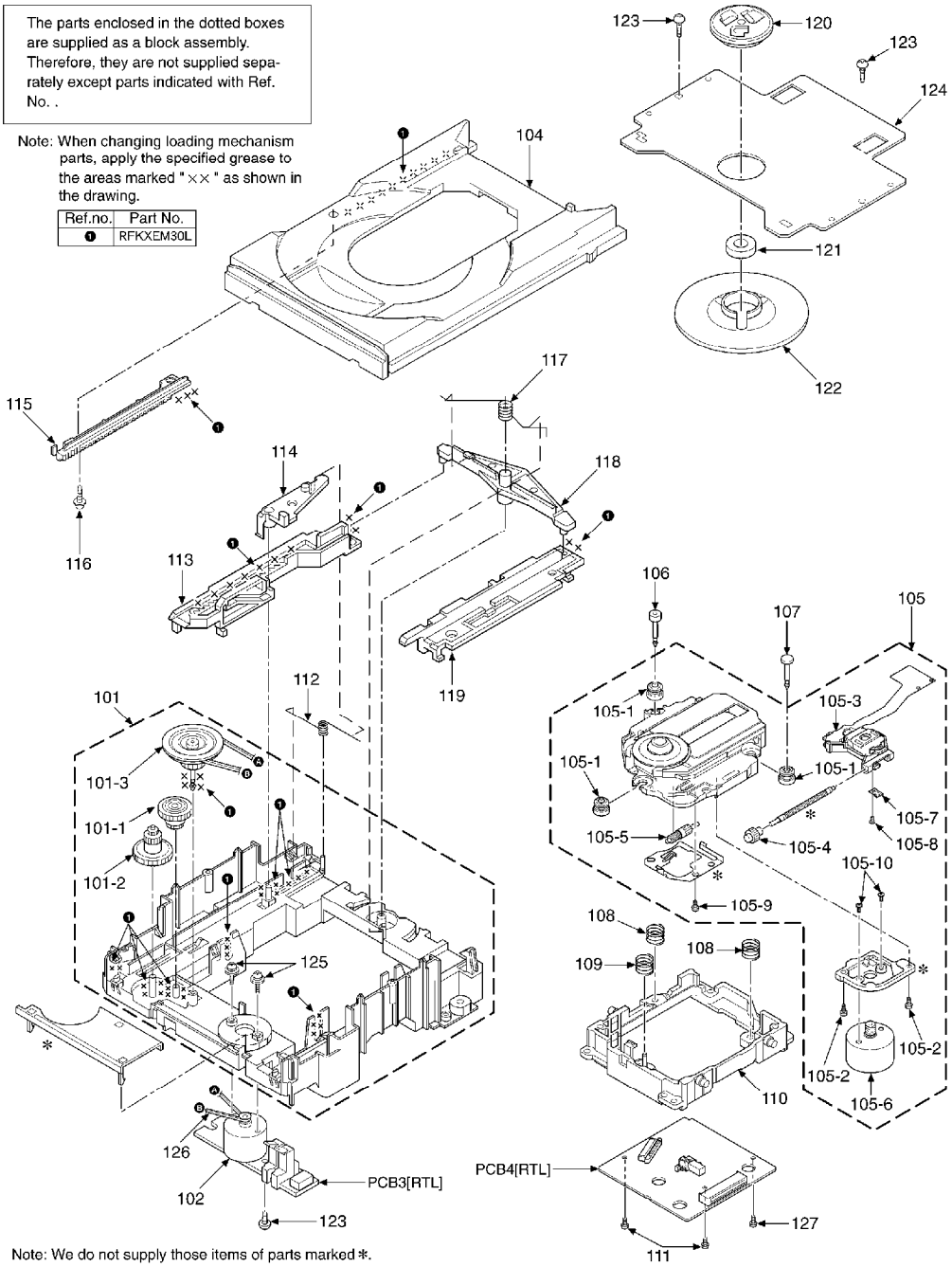
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
JK401	RJT065K19	SYSTEM CONNECTOR(19P)	1	K1FA219B0001
PCB1	REP3300AA-S	MAIN P.C.B.ASS'Y	1	[RTL]
PCB2	REP3300AB-S	OPR P.C.B.ASS'Y	1	[RTL]
PCB3	REP1960A	LOADING MOTOR P.C.B.ASS'Y	1	[RTL]
PCB4	REP3118B-N	SERVO P.C.B.ASS'Y	1	[RTL]
Q201	DTC114YUA106	TRANSISTOR	1	B1GBCFJN0009
Q401-04	2SC4081STX	TRANSISTOR	4	B1ABCF000021
Q405	2SB1417PQTA	TRANSISTOR	1	2SB14170JA
Q408,09	DTA143XUT106	TRANSISTOR	2	B1GDCFGH0005
Q500	2SC4081STX	TRANSISTOR	1	B1ABCF000021
Q701	2SB709S	TRANSISTOR	1	2SB07090S
R101	ERQ16NKWR22E	1/6W 0.22	1	
R201	ERJ6GEYJ681V	1/10W 680	1	
R202	ERJ6GEYJ104V	1/10W 100K	1	
R221-28	ERJ6GEYJ101V	1/10W 100	8	
R229	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R230	ERJ6GEYJ103V	1/10W 10K	1	
R231-35	ERJ6GEYJ101V	1/10W 100	5	
R236	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R237	ERJ6GEYJ101V	1/10W 100	1	
R238	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R239	ERJ6GEYJ103V	1/10W 10K	1	
R240,41	ERJ6GEYJ102V	1/10W 1K	2	
R242	ERJ6GEYJ103V	1/10W 10K	1	
R243	ERJ6GEYJ101V	1/10W 100	1	
R244	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R245,46	ERJ6GEYJ102V	1/10W 1K	2	
R247,48	ERJ6GEYJ472V	1/10W 4.7K	2	D0GD472JA012
R405	ERJ6GEYJ682V	1/10W 6.8K	1	D0GD682JA003
R406	ERJ6GEYJ103V	1/10W 10K	1	
R407	ERJ6GEYJ153V	1/10W 15K	1	
R414	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R423	ERJ6GEYJ272V	1/10W 2.7K	1	D0GD272JA003
R427	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R428	ERJ6GEYJ103V	1/10W 10K	1	
R429	ERJ6GEYF473	1/10W 47K	1	
R439	ERJ6GEYJ100V	1/10W 10	1	
R440	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R442	ERDS1FJ102	1/2W 1K	1	
R450	ERJ6GEYJ272V	1/10W 2.7K	1	D0GD272JA003
R451	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R452	ERJ6GEYJ272V	1/10W 2.7K	1	D0GD272JA003
R453	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R455,56	ERJ6GEYJ102V	1/10W 1K	2	
R458	ERJ6GEYJ102V	1/10W 1K	1	
R459,60	ERJ6GEYJ224V	1/10W 220K	2	D0GD224JA012
R471-74	ERJ6GEYJ330V	1/10W 33	4	D0GD330JA003
R500	ERJ6GEYJ223V	1/10W 22K	1	D0GD223JA003
R501	ERJ6GEYJ331V	1/10W 330	1	
R701	ERJ3GEYJ4R7V	1/16W 4.7	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R702	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R704	ERJ3GEYJ102V	1/16W 1K	1	
R705	ERJ3GEYJ154V	1/16W 150K	1	
R706	ERJ3GEYJ102V	1/16W 1K	1	
R707	ERJ3GEYJ393V	1/16W 39K	1	D0GB393JA002
R708	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R709	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R711	ERJ3GEYJ823V	1/16W 82K	1	D0GB823JA002
R712	ERJ3GEYJ221V	1/16W 220	1	
R714	ERJ3GEYJ121V	1/16W 120	1	
R715	ERJ3GEYJ102V	1/16W 1K	1	
R717,18	ERJ3GEYJ102V	1/16W 1K	2	
R721	ERJ3GEYJ101V	1/16W 100	1	
R723	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R724	ERJ6GEYJ183V	1/10W 18K	1	
R725	ERJ3GEYJ391V	1/16W 390	1	
R727-29	ERJ3GEYJ392V	1/16W 3.9K	3	
R731	ERJ6GEYJ682V	1/10W 6.8K	1	
R735	ERJ6GEYJ101V	1/10W 100	1	
R736	ERJ3GEYJ101V	1/16W 100	1	
R741	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R742	ERJ6GEYJ224V	1/10W 220K	1	
R744	ERJ3GEYJ124V	1/16W 120K	1	D0GB124JA002
R749	ERJ3GEYJ472V	1/16W 4.7K	1	
R750	ERJ6GEYJ4R7V	1/10W 4.7	1	
R753	ERJ3GEYJ100V	1/16W 10	1	
R800	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R801	ERJ6GEYJ332V	1/10W 3.3K	1	
R802	ERJ6GEYJ222V	1/10W 2.2K	1	
R803	ERJ6GEYJ152V	1/10W 1.5K	1	D0GD152JA003
R804	ERJ6GEYJ122V	1/10W 1.2K	1	
R805	ERJ6GEYJ152V	1/10W 1.5K	1	D0GD152JA003
R806	ERJ6GEYJ122V	1/10W 1.2K	1	
RJ501-04	ERJ6GEY0R00V	CHIP JUMPER	4	
RJ701,02	ERJ6GEY0R00V	CHIP JUMPER	2	
RJ704	ERJ6GEY0R00V	CHIP JUMPER	1	
RJ710	ERJ6GEY0R00V	CHIP JUMPER	1	
RJ712-14	ERJ6GEY0R00V	CHIP JUMPER	3	
RJ721-42	ERJ3GEY0R00V	CHIP JUMPER	22	
S701	RSH1A043-U	SW,REST	1	K0J1BB000022
S790,91	RSH1A005	SW,OPEN/CLOSE DET.	2	K0J1BB000010
S801-09	EVQ11G05R	SW,PUSH	9	
X201	EF0MC6004T4	OSCILLATOR	1	
X701	RSXB16M9J02T	OSCILLATOR	1	

18. Cabinet Parts Location



19. Loading Unit Parts Location



20. Schematic Diagram for printing with A4 size

H020400000TN/AM

SCHEMATIC DIAGRAM–2

B LOADING MOTOR CIRCUIT

IC790
TA7291S
MOTOR DRIVE

C790 10V82

LOADING MOTOR

S791 (CLOSE DET.)
S790 (OPEN DET.)

CP790 — CN401

D OPERATION CIRCUIT

R804 1.2K
R803 1.5K
R802 2.2K
R801 3.3K
R800 4.7K

S801 (OPEN/ CLOSE)
S802
S803
S804
S805
S806

R806 1.2K
R805 1.5K

D801 SML79420C

S807 (EDIT)
S808 (REPEAT)
S809 (RANDOM)

W801

CN403

C MAIN CIRCUIT

:POSITIVE VOLTAGE LINE
:CD PLAYBACK SIGNAL LINE

7.3V
5.2V
3.3V

IC201
C2BBFD000340
SYSTEM CONTROL

CLOSE SW, KEY1, KEY2, H:CR2, NC, OPEN SW, NC, NC, NC, RESTSW, NC, NC, STATUS, MLD, MCLK, MDATA, TEST, LED GRN, NC, NC, LED ORG

Vcc, VREF, AVss, SYNC, SUBQ, SQCK, BLKCK, B REQ, B CS, B CLK, DATA O, DATA I, CW, CCW, CNVss, SERVORST, NC, RESET, X IN, X OUT, Vss

STOP/ PLAY
1.8V P-P
F=6MHz

C L K J A B D F E N

X201 (6MHz)

C204 0.1

R201 680

C202 50V3.3
D201 MA111TX
Q201 DTC114YUA106
RESET

R202 100K
C203 0.1

Q408,409
DTA143XUT106
LED DRIVE

Q408
Q409

R240 1K
R241 1K
RJ504 0 Ω
C240 470P
C241 470P

R242 10K
R239 10K

IC401
C0CAABE00007
REGULATOR

Q405
2SB1417PQTA
REGULATOR

Q500
2SC4081STX
STABILIZER

D501 MA111TX
D404 MA8075MTX
D500 MA111TX

+13V
GND
E401

Q404
2SC4081STX
INTERFACE

Q403
2SC4081STX
INTERFACE

Q401
2SC4081STX
INTERFACE

Q402
2SC4081STX
INTERFACE

D409 MA111TX
D410 MA111TX
D221 MA111TX
D222 MA8033LTX

RJ502 0 Ω
RJ503 0 Ω
RJ501 0 Ω

JK401
1 +B(13V)
2 CD REQ
3 M.GND
4 CS
5 +B(5V)
6 D.GND
7 CLK
8 DATA
9 DECKREQ
10 SYNC
11 NC
12 NC
13 RS A.GND
14 NC
15 NC
16 CD Rch OUT
17 A.GND
18 CD Lch OUT
19 NC

To TUNER(ST-HD560) & CASSETTE DECK (RS-HD560)

CN402
Lch IN, A.GND, Rch IN, +B(2), D.GND, LD SW, TX, +B(1), P.GND, MCLK, MDATA, MLD, SPEED, BLKCK, SQCK, SUBQ, STAT, / RST, REST SW

To A CD SERVO CIRCUIT(CN702) on SCHEMATIC DIAGRAM–1/9~11-A

IC402
GP1FA550TZ
TRANS MISSION MODULE

INPUT, Vcc, GND

DIGITAL OPTICAL OUT

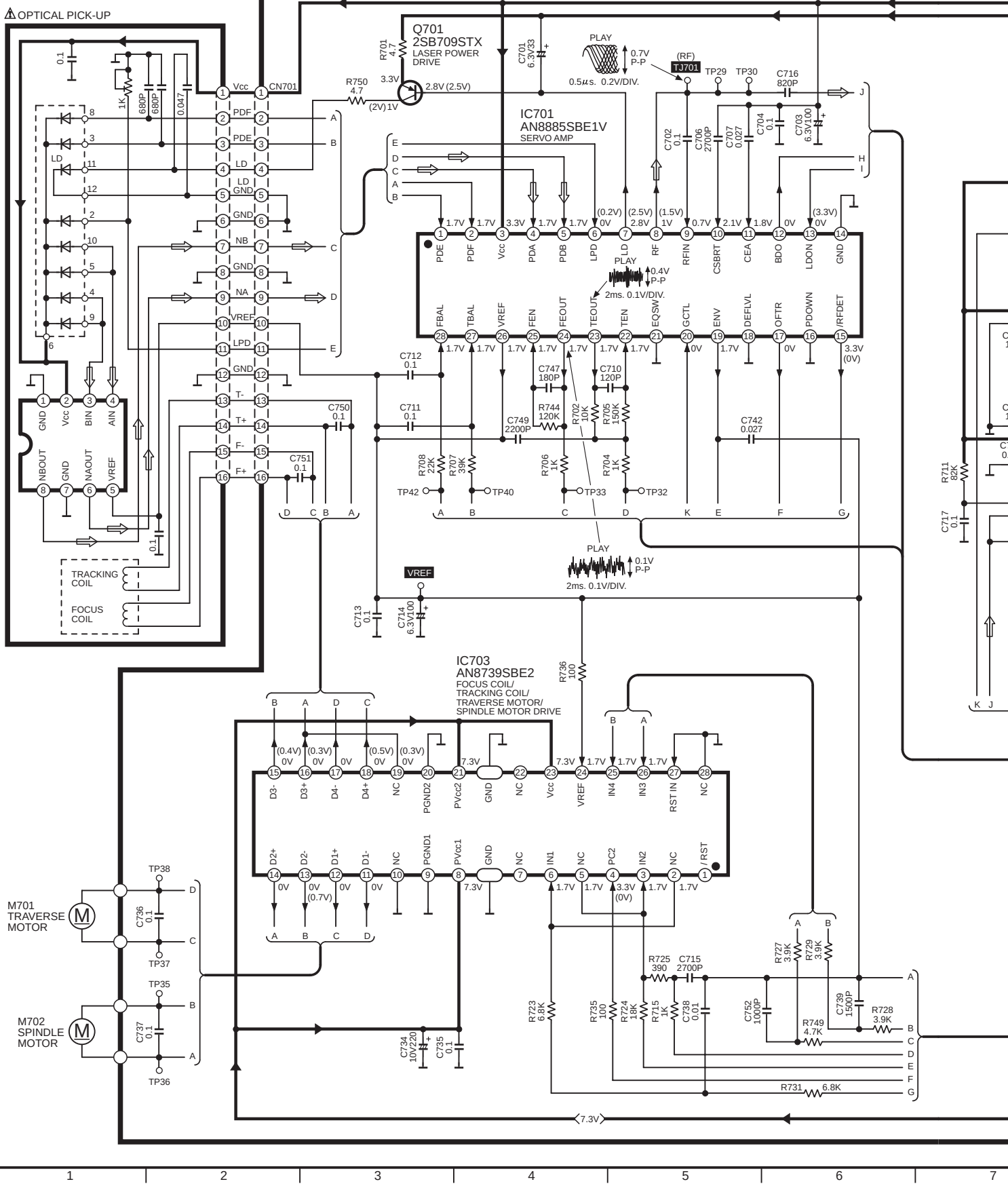
SL-HD560(E) MAIN,LOADING MOTOR,OPERATION CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM-1

NOTE:
The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

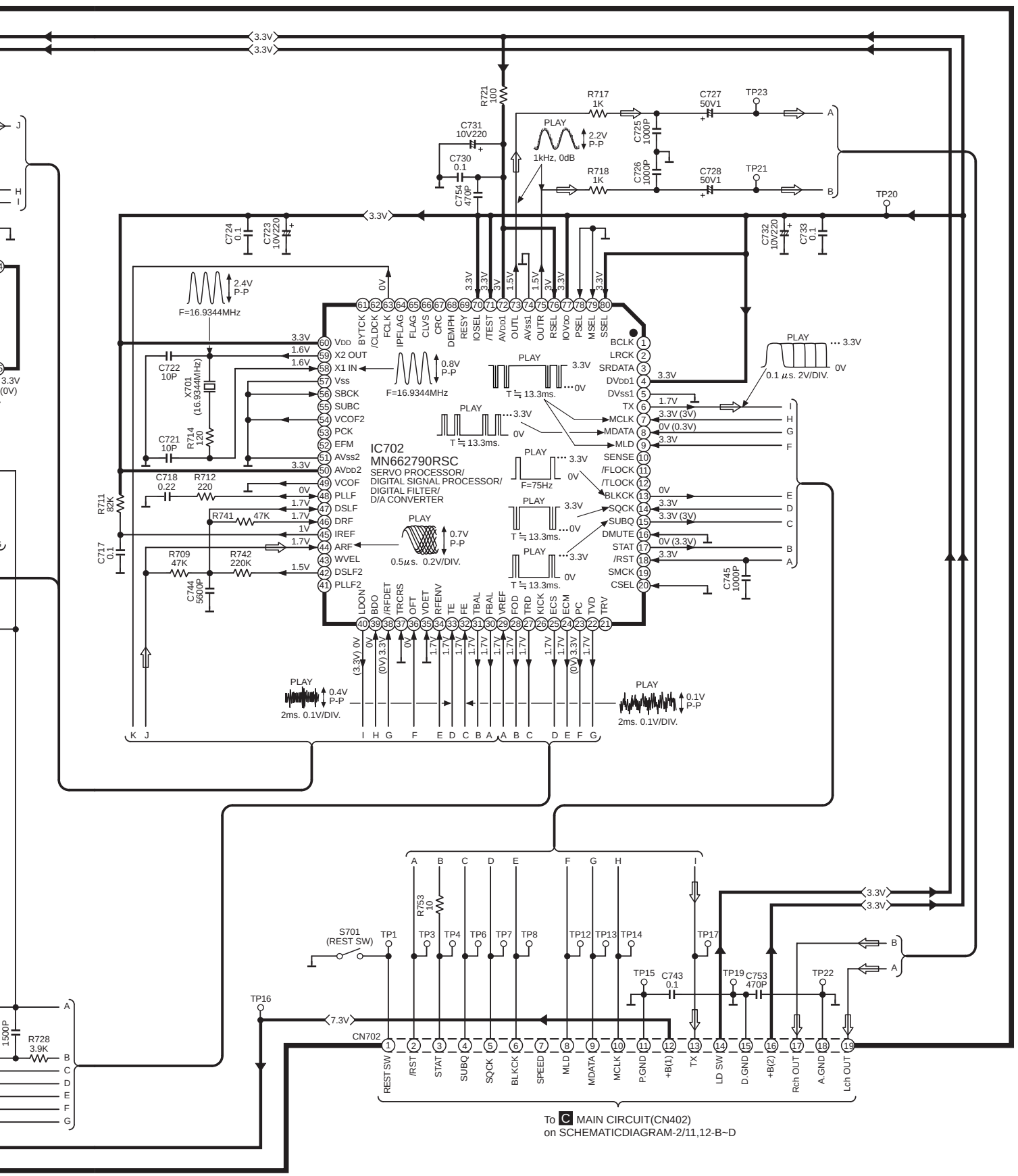
A CD SERVO CIRCUIT

:POSITIVE VOLTAGE LINE :CD PLAYBACK SIGNAL LINE



"SCHEMATIC DIAGRAM-2"

SIGNAL LINE



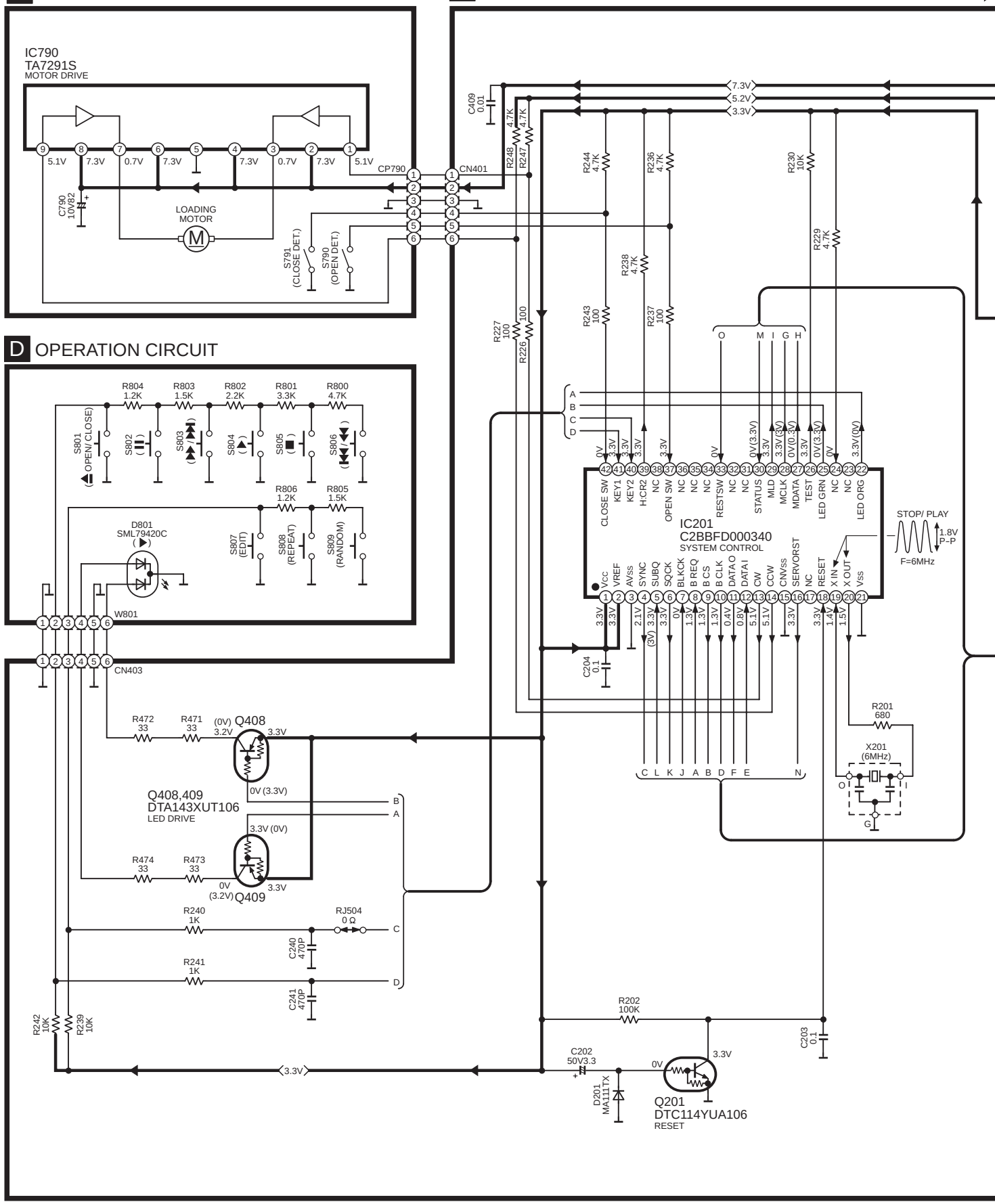
SL-HD560(E) CD SERVO CIRCUIT DIAGRAM

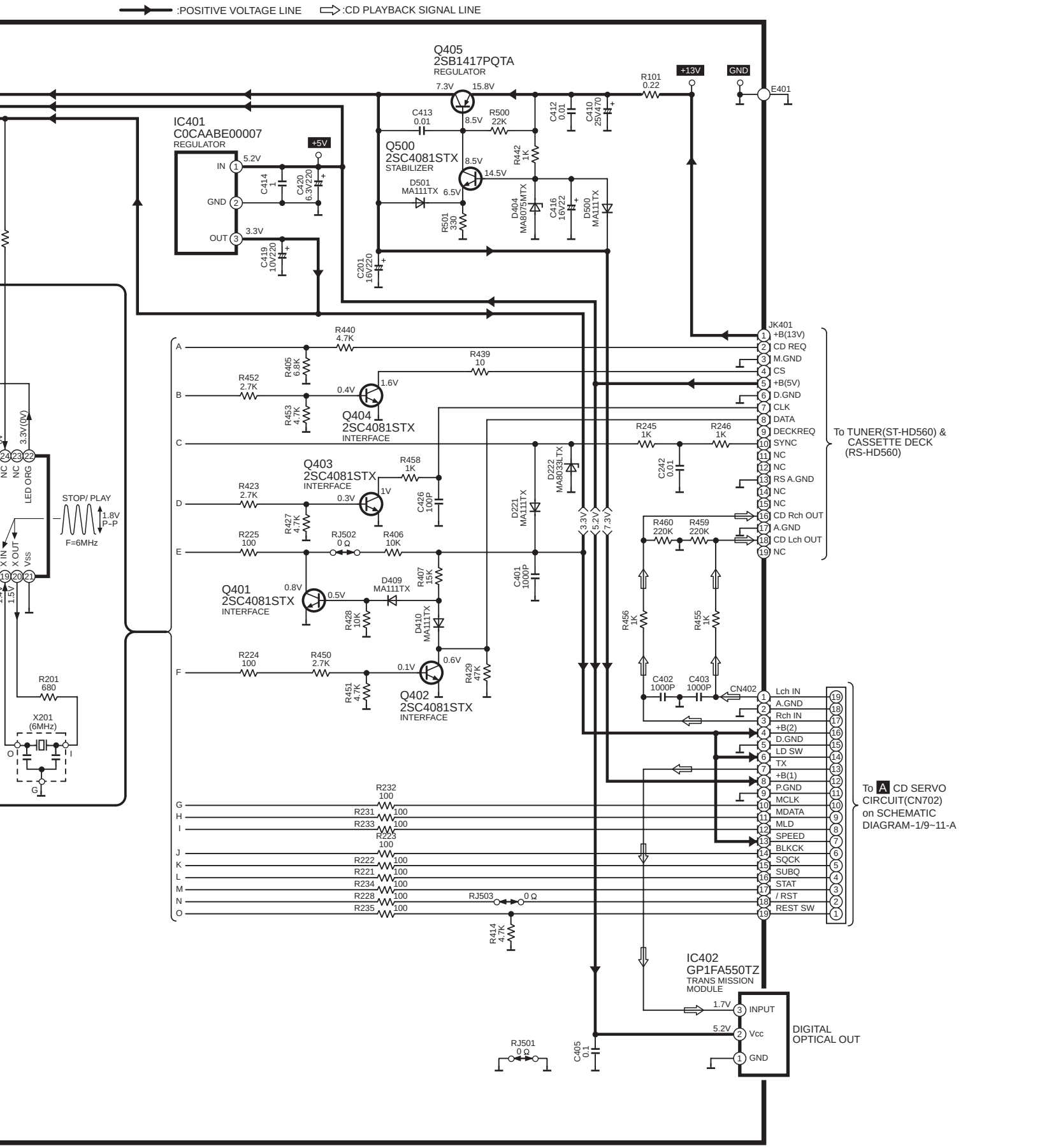
SCHEMATIC DIAGRAM–2

B LOADING MOTOR CIRCUIT

C MAIN CIRCUIT

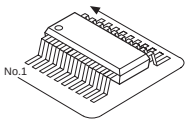
D OPERATION CIRCUIT



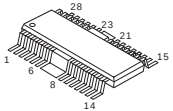


SL-HD560(E) MAIN,LOADING MOTOR,OPERATION CIRCUIT DIAGRAM

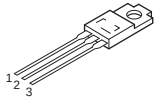
AN8885SBE1V	28PIN
C2BBFD000340	42PIN



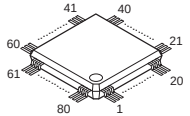
AN8739SBE2



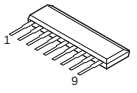
C0CAABE00007



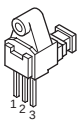
MN662790RSC



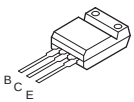
TA7291S



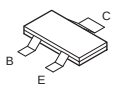
GP1FA550TZ



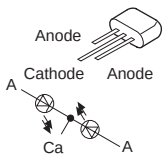
2SB1417PQTA



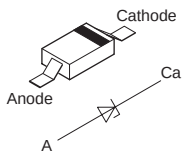
2SB709STX
2SC4081STX
DTA143XUT106
DTC114YUA106



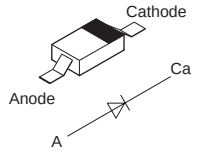
SML79420C

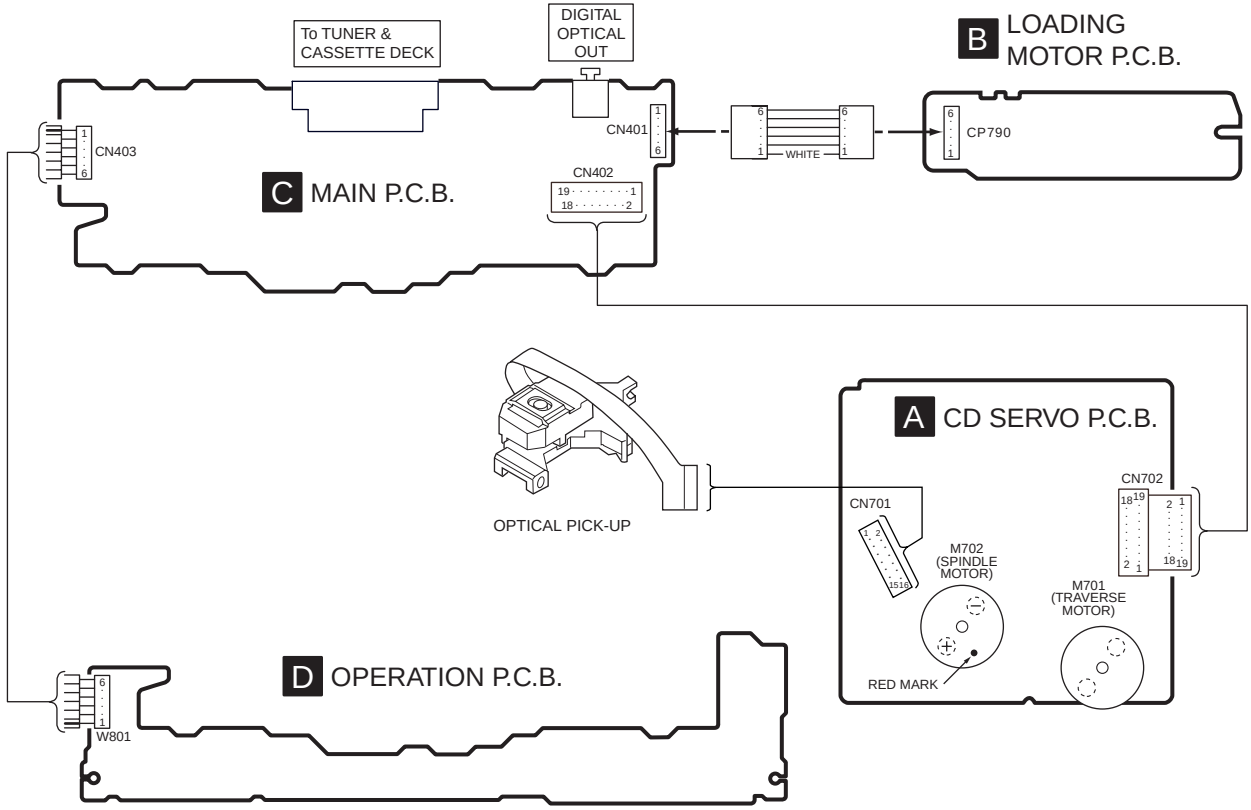


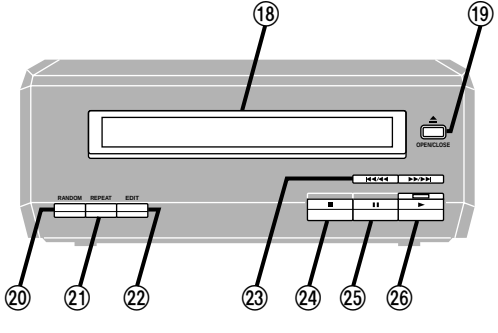
MA8075MTX
MA8033LTX



MA111TX




To TUNER & CASSETTE DECK
DIGITAL OPTICAL OUT
B LOADING MOTOR P.C.B.
CN403
CN401
CN402
WHITE
CP790
C MAIN P.C.B.
OPTICAL PICK-UP
A CD SERVO P.C.B.
CN701
CN702
M702 (SPINDLE MOTOR)
M701 (TRAVERSE MOTOR)
RED MARK
D OPERATION P.C.B.
W801



⑱ **Disc tray**
⑲ **Disc tray open/close button (≜OPEN/CLOSE)**
⑳ **Random play button (RANDOM)**
㉑ **Repeat button (REPEAT)**
㉒ **CD edit button (EDIT)**
㉓ **Skip/search buttons (|◄◄/◄◄, ►►/►►|)**
㉔ **Stop button (■)**
㉕ **Pause button (II)**
㉖ **Play button and indicator (►)**
The color of the indicator depends on the operation taking place.
If stopped: orange
If playing: green

AN8885SBE1V
IC701
SERVO AMP

(RF)
TJ701

OPTICAL PICK-UP

Q701
LASER POWER DRIVE

SEMICONDUCTOR LASER

PHOTO DETECTOR

RFEQ1
RFEQ2
AMP
GCA
BCA
SUBTRA-CTOR
OFTR
3TENV
BDO
NRF DET.
BAND GAP

RF
RF IN
DEFLVL
CSBRT
CEA
ENV
OFTR
BDO
/RFDET
FEN
FE OUT
TEN
TE OUT
VREF
Vcc
GND
LDON
PDOWN
EQSW
GCTL
TBAL
FBAL
FCLK

RFENV
OFT
FE
TE

FOCUS COIL
F+
F-
FOCUS COIL DRIVE
FOD

TRACKING COIL
T+
T-
TRACKING COIL DRIVE
TRD

M701
TRAVERSE MOTOR
TRAVERSE MOTOR DRIVE
TVD

M702
SPINDLE MOTOR
SPINDLE MOTOR DRIVE
ECS
ECM
PC

RESET SIGNAL GENERATOR
/RST

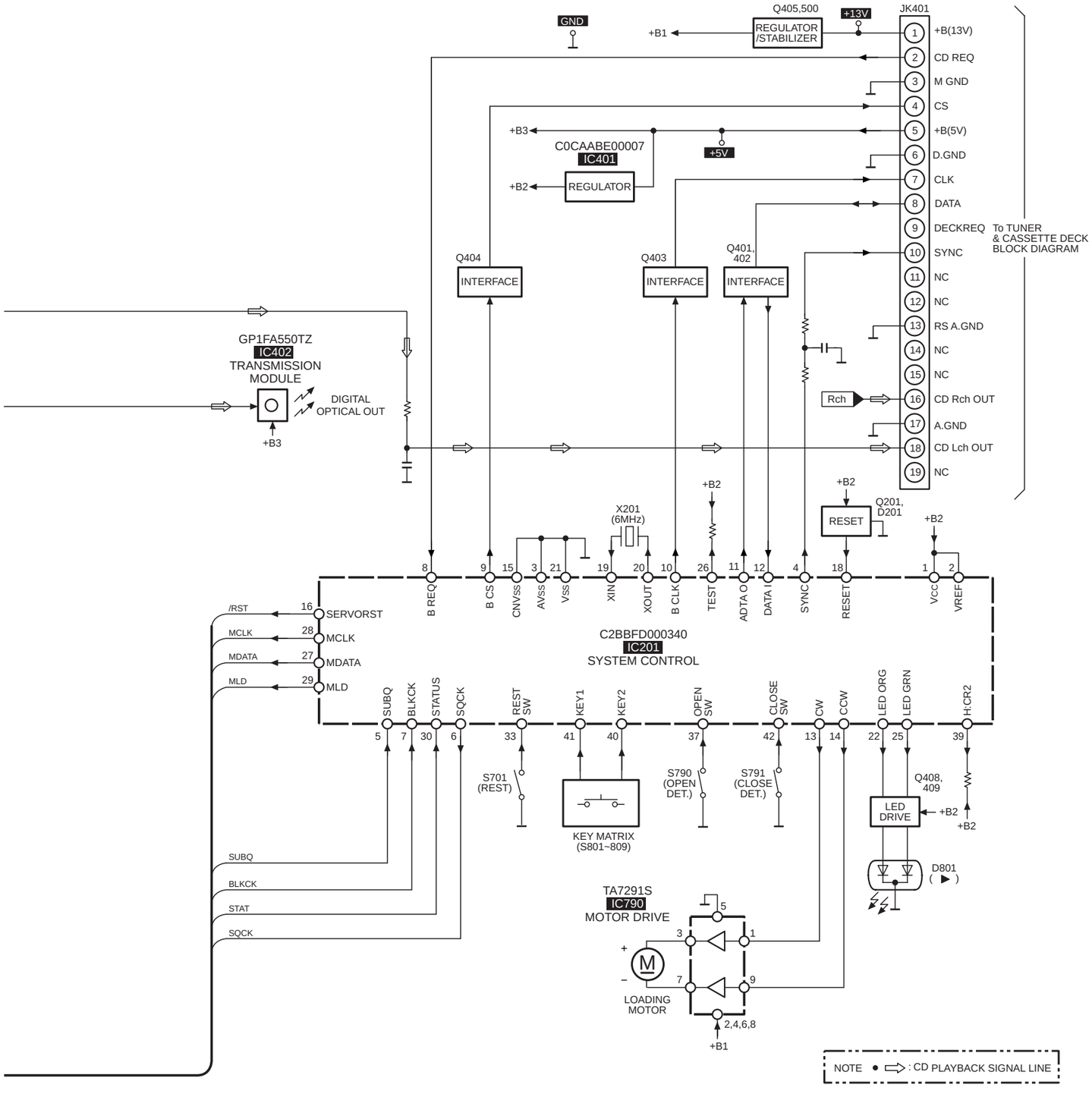
PGND1
PGND2
PVcc1
PVcc2
Vcc
+B1
+B2

AN8739SBE2
IC703
FOCUS COIL / TRACKING COIL / TRAVERSE MOTOR / SPINDLE MOTOR DRIVE

MN662790RSC
IC702
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR
DIGITAL FILTER / D/A CONVERTER

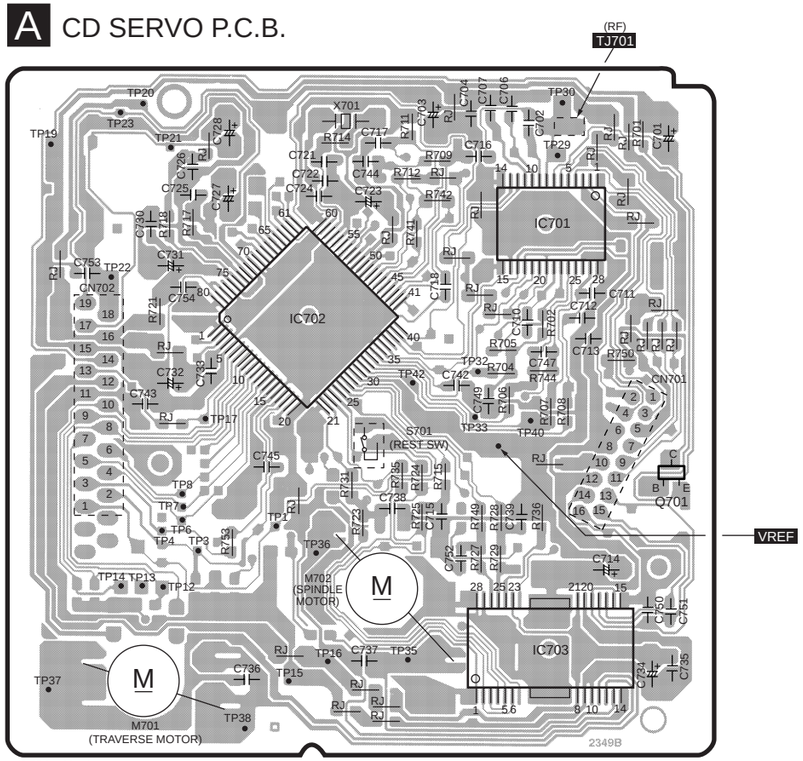
DSL / PLL VCO
SUBCODE BUFFER
CD-TEXT BUFFER
EFM DEMODULATION/ SYNC INTERPOLATION SUBCODE DEMODULATION
CIRC ERROR CORRECTION/ DEINTERLEAVE
16k SRAM
DIGITAL DEEMPHASIS
8 TIMES OVERSAMPLING/ DIGITAL FILTER
1 BIT DAC PWM LOGIC
PWM (R)
PWM (L)
DIGITAL AUDIO INTERFACE
DIGITAL AUDIO INTERFACE
INTERPORATION/ SOFT MUTING/ DIGITAL ATTENUATION
D/A CONVERTER
OUTPUT PORT
MICRO COMPUTER INTERFACE
SERVO CPU
TIMING GENERATOR PITCH CONTROL
VCO
A/D CONVERTER
INPUT PORT
SERVO TIMING GENERATOR
X701
(16.9344MHZ)

DVDD1
AVDD2
AVDD1
VDD
IOVDD
/TEST
DVSS1
AVSS1
AVSS2
VSS
RESY
IOSEL
CLVS
CRC
BLKCK
/CLDCK
SBCK
SUBC
DEMPH
SSEL
SQCK
SUBQ
PCK
PLLF
EFM
PLLF2
DSLF
DRF
ARF
RSEL
PSEL
MLD
MCLK
MDATA
IREF
STAT
MSEL
VCOF2
VCOF
BYTCK
OUTR
OUTL
R ch
FLAG
IPFLAG
TX
ECM
ECS
PC
LRCK
SRDATA
BCLK
DMUTE
DSLF2
KICK
TRV
VREF
TVD
TRD
FOD
TBAL
FBAL
/TLOCK
/FLOCK
SMCK
FCLK
CSEL
X2 OUT
X1 IN
FE
TE
RFENV
TRCRS
VDET
BDO
/RFDET
OFT
SENSE
WVEL
LDON
/RST


GND
Q405,500
REGULATOR /STABILIZER
+13V
+B1
JK401
1 +B(13V)
2 CD REQ
3 M GND
4 CS
5 +B(5V)
6 D.GND
7 CLK
8 DATA
9 DECKREQ
10 SYNC
11 NC
12 NC
13 RS A.GND
14 NC
15 NC
16 CD Rch OUT
17 A.GND
18 CD Lch OUT
19 NC
To TUNER & CASSETTE DECK BLOCK DIAGRAM
+B3
C0CAABE00007
IC401
+5V
+B2
REGULATOR
Q404
INTERFACE
Q403
INTERFACE
Q401, 402
INTERFACE
GP1FA550TZ
IC402
TRANSMISSION MODULE
DIGITAL OPTICAL OUT
+B3
Rch
+B2
RESET
Q201, D201
+B2
X201 (6MHz)
+B2
8 B REQ
9 B CS
15 CNVSS
3 AVSS
21 VSS
19 XIN
20 XOUT
10 B CLK
26 TEST
11 ADTA O
12 DATA I
4 SYNC
18 RESET
1 VCC
2 VREF
C2BBFD000340
IC201
SYSTEM CONTROL
/RST
16 SERVORST
MCLK
28 MCLK
MDATA
27 MDATA
MLD
29 MLD
5 SUBQ
7 BLKCK
30 STATUS
6 SQCK
33 REST SW
41 KEY1
40 KEY2
37 OPEN SW
42 CLOSE SW
13 CW
14 CCW
22 LED ORG
25 LED GRN
39 H:CR2
S701 (REST)
KEY MATRIX (S801~809)
S790 (OPEN DET.)
S791 (CLOSE DET.)
Q408, 409
LED DRIVE
+B2
+B2
D801
SUBQ
BLKCK
STAT
SQCK
TA7291S
IC790
MOTOR DRIVE
5
3
1
7
9
2,4,6,8
+B1
LOADING MOTOR
NOTE : CD PLAYBACK SIGNAL LINE

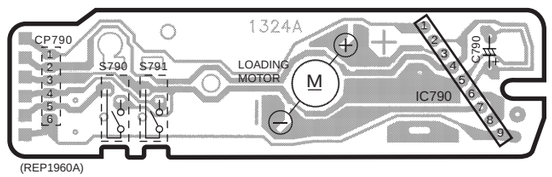
Note: This printed circuit board diagram may be modified at any time with the development of new technology.

A CD SERVO P.C.B.



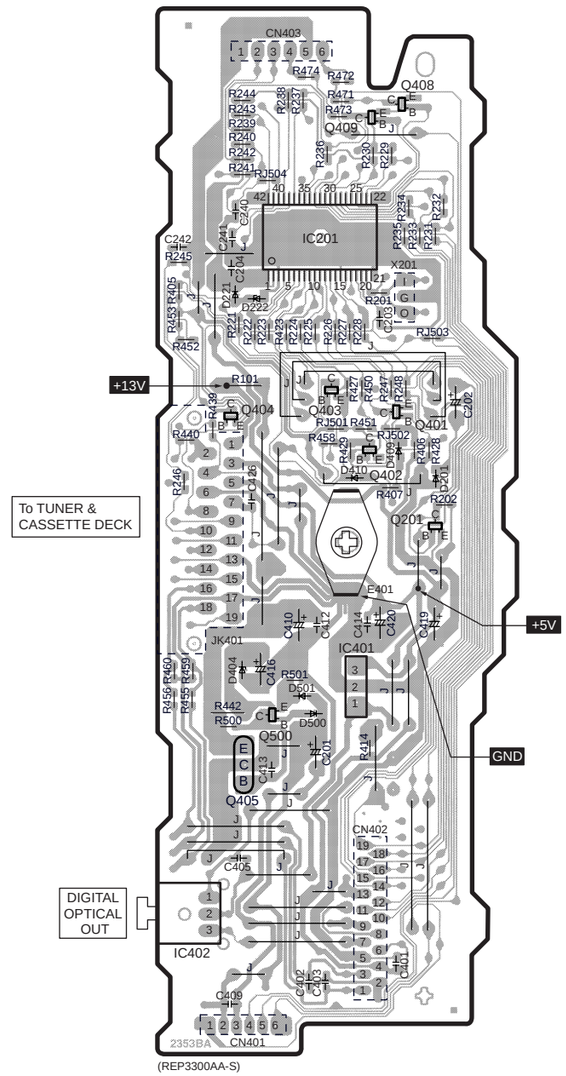
(REP3118B-N)

B LOADING MOTOR P.C.B.



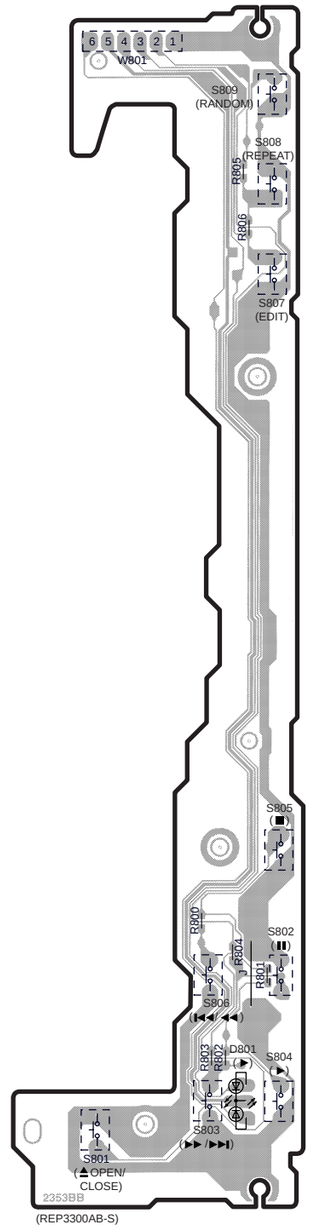
(REP1960A)

C MAIN P.C.B.



(REP3300AA-S)

D OPERATION P.C.B.



(REP3300AB-S)

SCHEMATIC DIAGRAM-1

NOTE:
The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

A CD SERVO CIRCUIT

:POSITIVE VOLTAGE LINE :CD PLAYBACK SIGNAL LINE

OPTICAL PICK-UP

CN701

Q701
2SB709STX
LASER POWER DRIVE

IC701
AN8885SBE1V
SERVO AMP

IC702
MN662790RSC
SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER

IC703
AN8739SBE2
FOCUS COIL/
TRACKING COIL/
TRAVERSE MOTOR/
SPINDLE MOTOR DRIVE

TRACKING COIL
FOCUS COIL

M701 TRAVERSE MOTOR
M702 SPINDLE MOTOR

S701 (REST SW)

CN702

To C MAIN CIRCUIT(CN402)
on SCHEMATICDIAGRAM-2/11,12-B~D

SL-HD560(E) CD SERVO CIRCUIT DIAGRAM